ACADEMIC REQUIREMENTS FOR ADMISSION AS PREDICTORS OF ACADEMIC PERFORMANCE AT BAYERO UNIVERSITY, KANO.

BY

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APPROVAL PAGE

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CERTIFICATION

I certify that this research work was conducted, written and compiled by me. I also certify that to the best of my knowledge, this research work has never been presented wholly or partially for the award of any degree or for publication elsewhere.

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DEDICATION

This research work is dedicated to my daughter, Miss Nguavese Atsua.

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ABSTRACT

The research was an investigation of the academic requirements for admission as predictors of academic performance at Bayero University, Kano. The major objective was to determine if the Post University Matriculation Examination (PUTME) recently introduced in 2006 as University admission requirement, predicts students' University performance better than the Senior Secondary Certificate Examination (SSEC) and the Unified Tertiary Matriculation Examination (UTME). The population of study was 100- level students of Bayero University, Kano, for the 2009/2010, 2010/2011 and 2011/2012 academic sessions. The students numbered 18,421 and made up of 11,337 males and 7,044 females. A sample of 361 students was selected from each of the three academic sessions, bringing the total sample for the research to 1,083. This comprised of 658 males and 425 females. The stratified random sampling technique was used in sample selection. There was no data collection instrument since the data was already available in records. An appropriate data collection proforma was designed and used in data collection. Eleven null hypotheses were formulated and tested. The Pearson Product Moment Correlation was used in test of hypotheses. The results showed that the SSCE is poor in predicting academic performance but UTME and PUTME results were found to be significant in predicting academic performance. UTME was also found to predict students' performance better than PUTME. Results also showed that the correlation of female entry results and the CGPA was higher than that of the males and Science correlation was higher than Art and Social Science. Based on the results, it was concluded that educational decisions taken on the basis of SSCE results were erroneous. That WAEC and NECO have not done enough to curb examination malpractices in the conduct of their examinations. The UTME is now free of examination malpractices and their results now predict academic performance. That Univerity authorities were right by introducing the PUTME in 2006 as an entry requirement into Universities. The recommendations made were that WAEC and NECO should do more to end cases of examination malpractices just as the case with JAMB., that paper qualification should be deemphasized as a measure against examination malpractices in public examinations. Finally, it was recommended that if test results are to be combined for admission purposes and other educational decisions, it should be the UTME and PUTME results.

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2011/1012 Academic Session

LIST OF ABBREVIATIONS

BUK: Bayero University, Kano
CGPA: Cumulative Grade Point Average
CSUP: Combined SSCE, UTME and PUTME results
CUP: Combined UTME and PUTME results
DEAR: Directorate of Examinations, Admissions and Records
ECCE: Early Childhood Care and Education
GCE: General Certificate in Education
HSC: Higher School Certificate
IRF: Item Response Function
IRT: Item Response Theory
JAMB: Joint Admission and Matriculation Board
NABTEB: National Business and Technical Examination Board
NCE: Nigeria Certificate in Education
NECO: National Examinations Council
NERDC: Nigerian Educational Research and Development Council
NUC: National Universities Commission
OND: Ordinary National Diploma
PPMC: Pearson Product Moment Correlation
PUTME: Post Unified Tertiary Matriculation Examination
SSCE: Senior Secondary Certificate Examination
UTME: Unified Tertiary Matriculation Examination
WAEC: West African Examinations Council
WASSCE: West African Senior Secondary Certificate Examination

OPERATIONAL DEFINITION OF TERMS

Academic Performance: The amount of learning that has taken place at some level or at the end of a course of study, usually indicated by the score of a learner in a test on the course. At the University, the performance is indicated by the CGPA of learners.

Academic Requirements: Examination results that are needed for admission into institutions of higher learning. Example, WAEC and UTME results.

Arts: All Departments in the Faculties of Art and Islamic Studies, Education and law.

Certification Examination: Examinations in which certificates are given to candidates to show that they completed a course of study. Example, WAEC & NECO.

Science: All Departments under the Faculties of Science, Medicine Agriculture and Technology.

Selection Examinations: Examinations in which Certificates are not given but the results are used for admission purposes only. Example, UTME & PUTME

Test: Any set of items designed to measure the academic performance of learners

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

Tests and measurements are as old as human history. They have played a far more important role in human lives than is generally recognized. Various forms of tests and measurements have been developed and used in improving human practices over the years, both within and outside the field of Education. The use of tests and other measurement devices for various purposes predate that of the field of Education. For example, early discoveries in human history such as eatable fruits and crops, medicinal herbs, etc, were made possible after the application of some form of tests.

It has been documented that some of the earliest records of the use of various testing devices are found in the Bible. The illustration below will support the assertion:

> *And the Gileadites took the passages of the Jordan before the Epraimites: and it was so that when the Ephraimites which were escaped said, let me go over: that the men of Gilead said unto him, Are thou an Ephraimite? If he said Nay: then said they onto him say now shibboleth and he said sibboleth: for he could not frame to pronounce it right. Then they took him, and slew him at the passages of Jordan. (Stanley and Hopkins 1972, P155)*

This was an oral test with two short items, the result of which had extreme consequences (life or death). The Gileadites were satisfied with this examination and were taking major decisions on the basis of its results. However, a modern test expert will question the validity of the test. For example, it was possible for some Ephraimites to pronounce the word Shibboleth correctly and it

was also possible for some Gileadites to pronounce the word wrongly. A similar situation obtains in Nigeria where many Hausas have difficulties in pronouncing words beginning with letter 'P' and 'F' but a good number do not have this difficulty of pronouncing such words. Also, many Yorubas have difficulty in pronouncing words beginning with the letters 'H' and 'A' but not all of them. Likewise, many Tiv people, but not all, cannot pronounce the letter 'R'. Rather they pronounce it like the letter 'L'. Therefore, there was the possibility that some Ephraimites responded correctly to the test items and escaped death. There was also the possibility of the examiners making wrong judgment on the basis of only two test items. The evidence here is that, problems associated with test results are as old as the concept of test itself.

Over the years, test results have been used both within and outside the field of Education for decision making purposes. Example, the Civil Service Examination in China in about 1115 BC .

In the field of Education, a tradition of oral examination was built up over several centuries only to disintegrate almost completely in about 1660 at the time Isaac Newton attended college, . In the education of the younger pupils, examination began to become more prevalent as textbooks for the grammar school came to be formulated into distinct grade levels, (Mc Arthur, 1983). Tests and measurements in the field of Education are used for various purposes. For example, examination results provide information about the academic progress of a pupil to the pupil himself, his teacher and his parents. The results also assist the teacher in evaluating his/her success in the teaching of the subject and to modify and improve on his/her approach to the teaching of the subject when and where necessary.

There are different kinds of tests applied in the field of Education to improve educational practices, (Thorndike and Hagen, 1969). Example, Aptitude test which measures the potential or ability of a candidate to attain certain attributes or learning at a later stage; Diagnostic test which

is administered to investigate certain deficiencies or problems in order to determine remedial measures; Performance tests which require candidates to demonstrate some skills or abilities physically; Achievement tests which are administered to determine the extent of achievement of the objectives of a course of study, etc, (Sambo, 2005). The focus of this research is the achievement tests. This is because achievement tests results show a learner's present state of academic achievement as well as indicate his/her likely future performance.

Achievement tests are generally classified into two according to their construction procedures. These are teacher made achievement tests and standardized achievement tests, (Mehrens and Lehman, 1975). Teacher made achievement tests are tests constructed by subject teachers, who are in most cases, not test experts. As such, there is usually no advanced plan and the tests, in most cases, are lopsided. There is the tendency of over representing some areas of the syllabus while other areas are poorly represented or completely untouched, (Thorndike and Hagen, 1969). For these reasons, there is no assurance of the validity, reliability and discriminating ability in most of the tests. Difficulty level of the test may also not be appropriate for the level of the examinees. Standardized achievement tests on the other hand are constructed by test experts and cover wide range of instructional objectives. There is always a table of specification (Examination blue print) to ensure that every part of the syllabus is adequately covered by the test items. Questions are checked to ensure that the difficultly level is appropriate for the examinees and the test items discriminate between high and low achievers. Standardized achievement tests are also expected to be valid and reliable. Test validity is an indication that the test measures what it is intended to measure. Reliability of a test is the consistency of test scores when a particular test is administered on the same set of candidates over and over again, (Sambo,

Sunday and Olumuyiwa, 2004). This research considered both teacher made and standardized achievement tests.

Over the years, standardized achievement test results have been used as important yardstick for determining the suitability or otherwise of secondary school leavers for admission into tertiary institutions in Nigeria. The results of the tests are also used while seeking for employment opportunities and for elective positions. These are as a result of the confidence that individuals, organizations and institutions have in the ability of these tests results to predict performance of holders in various aspects of life. Standardized achievement tests as well as teacher made achievement tests are expected to be valid, reliable and discriminate between low and high achievers. The most important of these characteristics is validity and is the focus of this research. This is because validity is the quality of an achievement test that indicates a learner's present level of academic performance as well as predict his/her future academic performance. The results of the examinations under consideration in this research were assessed in terms of how well they predict candidates' future academic performance.

In Nigeria, there are four examination bodies that conduct standardized achievement tests for secondary school leavers. These are the West African Examinations Council (WAEC) which conducts the West African Senior Secondary Certificate Examination (WASSCE); the Joint Admission and Matriculation Board (JAMB) which conducts the Unified Tertiary Matriculation Examination (UTME); the National Examinations Council (NECO) which conducts Senior Secondary Certificate Examination (SSCE) and the National Business and Technical Examinations Board (NABTEB) which conducts the National Business and Technical Examinations (NBTE). The results of the above listed public examinations are used in obtaining admission into Nigerian Universities and other tertiary institutions of learning.

The West African Examinations Council was established in 1952 to conduct the West African School Certificate (WASC) in the four West African English speaking countries of Nigeria, Ghana, Sierra Leone and the Gambia. Liberia became the fifth member of the council in 1974. From 1952 to 1998, WAEC was the only examination body conducting the senior secondary certificate examination in Nigeria. Candidates who passed the relevant subjects at credit level were, in most cases, successful in future educational and other endeavors. In other words it had predictive validity.

Today, however, WAEC is being criticized in various quarters. Some of these criticisms include mass examination malpractices ranging from the sale of and leakage of examination question papers through connivance by staff, supervisors/invigilators and examination candidates, (Uchebuaka, 2001). Examination candidates also arrange for other persons to write some of the key subjects such as English language and Mathematics on their behalf with the knowledge of invigilators.

In 1999, another examination body was set up, the National Examinations Council (NECO). The new examination body was expected to provide an alternative to the WAEC examination as well as engender healthy competition towards improvement in early release of examination results and in reducing the amount of registration fees which parents and students complained about. While some Nigerians saw the establishment of NECO as an opportunity for alternative choice of examination body to patronize, others doubted its capacity to conduct valid and reliable examinations that could command widespread national and international respect and acceptability. NECO was established to serve as a perfect substitute for the WAEC's SSCE and it was left to NECO to prove itself as a formidable body, capable of valid and reliable

examinations. It was expected to take a lead in the conduct of malpractice free examinations, (Uchebuaka, 2001).

NECO conducted its first SSCE in the year 2000 and by the time the results were out, mix-ups were evident. Examination results were fantastic for all candidates that registered for the Examination. Those that registered for both WAEC and NECO examinations ended up with higher grades in all of the NECO papers than the WAEC papers. Again there were allegations of leakage of question papers and that candidates obtained credit passes in subjects they never sat for. Some people alleged that some candidates registered for the examination but died before the examination was taken. However, when the examination result was out, such candidates did not only have results, they had a number of credit passes. Commenting on the performance of candidates in NECO examination, Uchebuaka, (2001) said NECO is not a true examination body, but is only out to sabotage the educational efforts being made in the country. Also commenting on the same issue, Leigh (2001) said it will take NECO more than ten years to acquire the necessary skills and expertise to successfully handle a crucial examination like the SSCE.

The Joint Admission and Matriculation Board (JAMB), was established in 1978 as Nigeria's official entrance examination board for tertiary institutions. Examinations administered by JAMB are available for students that choose to apply to Nigerian public and private Monotechnics, Polytechnics, Colleges of Education and Universities. These candidates must already have passed their external examinations administered either by WAEC or NECO or both. By 1974, there were seven Universities in Nigeria and each one conducted separate entrance examination and admitted its students. This method of admission had serious limitations and very often, waste of resources in the process of administering the examination, both on the part

of candidates and the University authorities. The general untidiness in the uncoordinated system of admission led to the setting up of a committee that recommended the establishment of JAMB, (Dickson, C.I. 2013)

The Unified Tertiary Matriculation Examination (UTME) conducted by JAMB has also suffered from cases of examination malpractices. As a result the Board had to take measures such as altering the format for examination question papers such that the same questions had different numbering arrangements. There is also restriction on the use of mobile phones in and around examination halls. Recently, JAMB introduced the computer based test to further enhance the quality of the test. The Board set year 2015 as the terminal date for paper based test, adding that parents and students should embrace the new development because of its advantages. The Board listed some of the advantages of the computer based test to include early release of results, not more than 72 hours, absence of manipulations, zero result seizure as well as absence of external influences.

The National Business and Technical Examination Board (NABTEB), was established in 1992 to conduct the National Business and Technical Examination for final year business and technical students. The NABTEB does not form part of this research.

Despite the efforts made by the various examination bodies to curb the menace of examination malpractice, it was recorded in the past that some students who had excellent grades in SSCE and high scores in UTME were given admission to read various courses in Nigerian Universities and were unable to cope academically. There were various cases of students who were adjudged to be brilliant by their performance in external examinations and admitted on merit but struggled to stay just below average, (Makinde, A.E 2013). This led to the Universities reverting to the old system of conducting separate entrance examination and admitting their candidates by

introducing the PUTME screening test in 2006. The test is designed to put a check on the caliber of candidates admitted into the institutions thereby improving on the correlation between entry qualifications and performance in the University programmes.

From the foregoing, therefore, it is clear that the entry requirements into Nigerian Universities have never been stable over the past few decades, leading to the present requirement of passing the PUTME screening test in addition to passing the SSCE and UTME. As such, it is pertinent to establish, with empirical evidence, whether or not this latest requirement is more appropriate for admission purposes compared to the previous ones.

1.2 Statement of the problem

The educational system of any particular country is organized such that there are procedures and requirements for transition from one lower level to the next higher level. For example, to enter into the secondary school level from the primary schools in Nigeria, candidates have to pass the National Common Entrance Examination, conducted by NECO, in the case of Federal Unity Schools; State Common Entrance Examination in the case of State Government owned secondary schools while the Private secondary schools each conduct separate entrance examinations for candidates intending to enter such schools. This practice has been consistent over the past many decades.

However, the transition from secondary schools to tertiary institutions, particularly the Universities, has witnessed several changes over the years. In the 1960s to late 1970s, to enter into the Nigerian Universities, candidates were required to pass the West African Schools Certificate Examination (WASC) as well as pass the entrance examination conducted by the University of their Choice. From 1978 to 2005, candidates were given admission into the Universities based on their performances in SSCE and UTME or SSCE and Higher School

Certificate (HSC). This practice was based on the assumption that a relationship exist between the performance of a student in these examinations and his/her subsequent performance in University programmes, (Sambo, 2005).

Today, a candidate has to pass the PUTME screening test in addition to passing the SSCE and UTME itself. The University authorities noticed discrepancies between the entry qualifications of candidates and their performance in University programmes and were determined to give admission to qualified candidates only. This led to changes in entry requirements over the years. Now that the PUTME screening test result is used in gaining admission into the Universities, can we conclude, from empirical evidence, that there is higher correlation between the PUTME test results and performance in University programmes than the SSCE and UTME? In other words does the PUTME test predict performance better than SSCE and UTME?

To determine the above, the 100- level CGPA of Bayero University undergraduates for the 2009/2010, 2010/2011 and the 2011/2012 academic sessions was correlated with their overall scores in the various examinations (SSCE, UTME and PUTME).

1.3 Objectives of the Study

This research was guided by the following objectives:

a. To determine whether or not the SSCE (WAEC and NECO) predicts students performance.
b. To determine whether or not the UTME conducted by JAMB predicts students performance.
c. To determine whether or not the PUTME screening test conducted by University authorities predicts students' performance.

d. To find out if the PUTME screening test better predicts students' performance than the SSCE and UTME.

e. To find out if there is significant difference in prediction of students' performance based on differences in gender and course of study.

1.4 Research hypotheses

The following null hypotheses were tested in the course of the study:

H_{01}. There is no significant relationship between WAECs SSCE results and CGPA scores of undergraduate students at Bayero University, Kano.

H_{02}. There is no significant relationship between NECO's SSCE results and CGPA scores of undergraduates at Bayero University, Kano.

H_{03}. There is no significant relationship between SSCE results (WAEC/NECO combined) and CGPA scores of undergraduates at Bayero University, Kano.

H_{04}. There is no significant relationship between UTME results and CGPA scores of undergraduates at Bayero University, Kano.

H_{05}. There is no significant relationship between PUTME screening test results and CGPA scores of undergraduates at Bayero University, Kano.

H_{06}. There is no significant relationship between the PUTME test results and CGPA scores of male undergraduates at Bayero University, Kano.

H_{07}. There is no significant relationship between the PUTME test results and CGPA scores of female undergraduates at Bayero University, Kano.

H_{08}. There is no significant relationship between the PUTME test results and CGPA scores of science undergraduates at Bayero University, Kano.

H_{09}. There is no significant relationship between the PUTME test scores and CGPA scores of Art undergraduates at Bayero University, Kano.

H_{O10}. There is no significant relationship between the PUTME test scores and CGPA scores of Social Science undergraduates at Bayero University, Kano.

H_{011} . There is no significant relationship between the combined composite score of SSCE, UTME and PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

1.5 Significance of the study

The SSCE conducted by WAEC or NECO and UTME conducted by JAMB are important examinations in the Nigeria Education system. Every prospective student wishing to gain admission into tertiary institutions must pass these examinations. As important as these examinations are, there is a dearth of researches on them. As a result, there is need for regular analytical assessment of the qualities expected of these examinations. The researches conducted on this area are on a different population and do not bring together all the academic requirements for University admission as done in this research.

Over the past few years, there has been growing concern over the wave of examination malpractices in public examinations. Individuals, Institutions and organizations are fast loosing respect and confidence in high grades obtained in public examinations by candidates. The general public is skeptical that such excellent results may have been obtained through dubious means. Examination bodies on their part are doing everything possible to curb the menace. If this research finds lower correlation between the results of these examinations and later performance compared to the correlation between PUTME test and later performance, the examination bodies will definitely have to put in more efforts towards curbing examination malpractices so as to

restore confidence in the examination results. If however, the correlation between SSCE/UTME and later performance is equal to or higher than that of PUTME test, then the public can have a change of attitude towards these examination results. In addition, Education decision makers will have to look out for the actual causes of the differences between candidates' results in entry requirements and their subsequent performance in institutions of higher learning if there is low correlation between PUTME results and CGPA. This is because, so far, there are no records of cases of examination malpractices in the conduct of the PUTME screening test.

Since 2006, University authorities have been conducting the PUTME test for candidates after the candidates have passed both the SSCE and UTME. The test involves the use of additional resources such as time, money, energy, etc, by both the candidates and University authorities. If the test is found to be effective in predicting candidates' future performance it will be the justification for extra efforts in the admission procedure. Otherwise the University authorities will have to look for another solution to the problem at hand.

Presently, candidates seeking admission into Nigerian Universities are required to pass three different examinations (SSCE, UTME and PUTME). This research will show if this rigorous procedure is the best for admission purposes. Elsewhere, educational decisions of this nature are taken on the basis of various results obtained from different kinds of tests. Anastasi and Urbina (2010) stated that, frequently, educational administrators and teachers have to act on the results obtained from several different kinds of tests. Many previous researches, Ogonor and Olubor(2002), Sumaila(2005), Umar(2006), etc, conducted on entry requirements as predictors of later academic achievement showed low correlation between the two. If this research shows high correlation between the combined composite score of SSCE,UTME and PUTME results and CGPA, educational decision makers will be encouraged to stick to this admission procedure.

Otherwise, there will be no need for such a long procedure that does not produce the desired result. In addition, the composite score obtained from the combined results of SSCE, UTME and PUTME correlated with CGPA may reveal a trend that may be useful for University admission decisions.

Furthermore, the correlation between SSCE and CGPA, UTME and CGPA as well as PUTME and CGPA will show if any of these academic requirements predicts academic performance better than the others, or if they have equal predictive validity. If any of the above cases occur, Educational decision makers will be advised to stick to one test result for admission of students if the results of the different tests are not to be combined for admission purpose as it is presently. This is because parents spend much money to get their children to sit for all of these tests. University candidates, on the other hand, spend much time and energy preparing for these tests. The research is also expected to show if the efforts being made by public examination bodies in curbing examination malpractices are yielding positive results.

It is also hoped that this research will stimulate further researches into other aspects of public examinations such as comparism of grading standards of WAEC and NECO's SSCE as well as the reliability of these examinations. So far, researchers, Downes(1976), Yusuf(2004), Ifedili and Ifedili(2010), etc, have concentrated on validity of the examinations leaving out reliability, comparability of grading standards and other important areas.

1.6 Scope and Delimitation of Study

The focus of the study was on the Senior Secondary Certificate Examination (SSCE) conducted by West Africa Examinations Council and the National Examinations Council, the Unified Tertiary Matriculation Examinations (UTME) and the PUTME screening test results. The study sought to find out if the results obtained in these examinations correlate with academic

performance of undergraduates (CGPA scores) at Bayero University, Kano. It also considered the combination of these test results to determine its effectiveness in predicting academic performance. Other academic requirements for University admission such as NABTEB, Nigeria Certificate in Education (NCE), General Certificate in Education Advanced Level (GCE A-Level) Ordinary National Diploma (OND), Higher School Certificate (HSC) were outside the scope of this research. The study was limited to 100- level undergraduates of Bayero University, Kano of the 2009/2010, 2010/2011 and 2011/2012 academic sessions. This is because at higher levels, some students may have been asked to withdraw from the Institution for failure to cope academically. In addition, there is the possible influence of length of stay in the University on academic performance of students. Also, the PUTME screening test is University based, that is, the test is not uniform across all Universities. Since the research is not concerned with comparism of prediction of the PUTME test across different Universities, it is sufficient to restrict the study to Bayero University, Kano, for three consecutive academic sessions.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

Measurement and evaluation are what everyone does daily, either formally or informally, (Sambo, Sunday and Olumuyiwa, 2004). Early forms of measurement and evaluation were made up of simple and oral tasks. Later, the written forms of measurement and evaluation started and with more difficult tasks. It was in the early part of the twentieth century that literature started coming out on measurement and evaluation in the area of education. Such literature was spearheaded by the works of Stone who published his arithmetic reasoning test in 1908, and Thorndike who published his scale for handwriting of children in 1909, (Mehrens and Lehman,1975). Since then, a lot more literature has come out on Educational Measurement and Evaluation from all over the World, including Nigeria. In this chapter, the relevant aspect of such literature to this research work is reviewed.

2.2 Conceptual background

2.2.1 Concept, types, qualities and uses of test

Concept of test: Cronbach, (1970) stated that there is no satisfactory definition to the word test. He, however, defined test as a systematic procedure for observing a person's behavior and describing it with the aid of a numerical scale or a category system. A numerical scale is applied in measuring behavior when a person is described as having 20/100, while a category system is used when a person is said to have red-green colour blindness. In the field of Education, test is a

major instrument for research and for measuring achievement (Sambo, 2005). The focus of this research is on test as an instrument for measuring academic achievement.

Classification of tests: Tests are classified according to their nature and purpose of measurement into several categories. A number of authors have given different classifications of test and for the purpose of this research; the classification by Sidhu, (2005) is given below. A number of categories in this classification may appear to overlap.

On the basis of type of questions

(a) Essay or free answer type: Here, a few questions are given in the test and the examinee has to give a detailed answer to each question. Usually, there is no limit to the length of answers to be provided to the questions. The test items are easy to develop but scoring is very tasking.

(b) Short answer type: The test questions demand short answers. The examinees are given instructions to the length of answers to the questions. For example, in not more than 200 words, describe the scene of an accident you witnessed. The answers are essay in nature but not the free response type. There are more questions here than the free answer type and the questions cover a greater part of the syllabus than the free response type of questions.

(c) Objective type: this is made up of a large number of questions, usually covering the whole syllabus. However, the answers required for each question are very short. The test items are difficult to develop but scoring is very easy. There are different kinds of objective tests such as true or false, multiple choice, matching items, completion, etc.

On the basis of administration

(a) Individual vs group tests: The test given to a single individual at a particular time is called an individual test. The tests are usually standardized. Well known examples of individual tests include Stanford –Binet Intelligence Scale, Wechsler Scale, Differential Ability Scales, etc.

Group testing is designed for mass testing of examinees. A large number of examinees are exposed to the same test items under uniform time limits and instructions.

(b) Oral vs written: In oral tests, the test items are not presented to the examinees in written form and the answers are also provided orally. The teacher uses oral tests in classroom situations. It enables the teacher to know how far students have grasped the material taught by him/her, how attentive the students are in the class and what areas need more clarification. Written tests require the use of paper and pen. They leave behind a record of the performance of an examinee which can be verified or checked for various purposes.

(c) Speed vs power tests: A speed test measures the ability of an examinee to think fast and accurately. It measures the speed with which a given task is performed. The test items are of low difficulty level which can all be answered correctly by each examinee. The time for the test is small such that no candidate can answer all the questions. The scores of a candidate indicate the speed with which he/she attempted the questions. A power test on the other hand provides enough time to all candidates. The difficulty level of the items is gradually and steadily increased from the first to the last item. The last few items are so difficult that no candidate can answer them correctly. This helps the examiner to understand to what level of difficulty a particular candidate can answer the questions correctly.

On the basis of construction procedure

(a) Teacher made tests: These tests are constructed by classroom teachers for classroom decisions. The teacher alone determines the test content and there are usually no uniform directions specified for administration and scoring. The item construction may be hurried and haphazard. Often, there is no table of specification, no item tryouts and the quality of the test

may be very poor. They are best suited for measuring the achievement of particular objectives set by the teacher and for inter class comparisms.

(b) Standardized tests: These tests measure a pupil's level of achievement in various content and skill areas. The test items are developed by educational and test experts, tried out experimentally and selected on the basis of appropriate difficulty level, discriminating power and their relationship to a clearly defined set of specifications. Directions for administration and scoring are precisely stated and norms are provided as aids in interpreting the test scores.

On the basis of traits

(a) Intelligence tests: These tests measure the general mental ability of an individual and indicate his/her ability to adjust (Sidhu, 2005). These tests are further classified into verbal, nonverbal, individual and group. These classifications have already been discussed above.

(b) Aptitude test: Also known as special ability test, this test is designed to appraise what an individual can learn to do if he/she receives appropriate education or job training.

(c) Achievement tests: These are used in determining the partial or final achievement of learners in various subject areas or activities. They are designed to appraise what an individual has learned to do as a result of planned previous experience or training provided in school. Schintzar, (2002) stated that achievement is viewed as an indicator of previous learning and so is often used to predict future academic success.

Other kinds of tests not directly discussed in the above classification include the following:

Personality test: This is a test that measures the non-intellective aspects of an individual's psychological make-up. Personality tests undertake to appraise the individual's typical or habitual way of acting. Personality tests most often refer to measures of such characteristics as emotional state, interpersonal relations, interests and attitudes.

Diagnostic test: This is a test that is sharply focused on some specific aspects of a skill or some specific case of difficulty in acquiring a skill, and that is useful in suggesting specific remedial actions that might help to improve the mastery of that skill.

Performance test: This is a test which requires an individual to physically demonstrate certain skills or abilities.

The focus of this research is on achievement test as it predicts learner's future academic success. Achievement test may be criterion referenced test or norm referenced test. A criterion referenced test measures an individual's achievement in terms of stated instructional objectives. For example, at the end of the week, students should be able to correctly write a formal and an informal letters. Norm reference tests are tests that reveal how well a student performs in relation to some group called 'norm group'. For example, if a student took a test and made a percentile rank of 55, it means the student did better than 55% of the children in the norm group (Sambo et al, 2004).

Achievement tests are also classified into two according to their construction procedure. These are Teacher made achievement test and Standardized achievement test. Mehrens and Lehman, (1975) gave the characteristics of a Teacher made achievement test as follows:

- The class room teacher alone determines the test content.
- There are usually no uniform directions specified for administration and scoring.
- Construction may be hurried and haphazard.
- Often, there is no table of specification, no item try outs and the quality of the test may be very poor.
- They are best suited for measuring particular objectives set by the teacher and for interclass comparism.

Standardized achievement tests are norm reference tests that measure pupils' level of achievement in various content and skill areas. It compares the performance of a pupil with the performance of other pupils in some general reference group. An example is a nationwide sample of pupils at the same grade level (Gronlund, 1985).

Sambo et al,(2004), defined standardized achievement tests as those test that measure behavior in such a way that one can objectively compare the performance of one with that of other students. The results are objectively taken and compared. Mehren and Lehman, (1975) also stated that standardized achievement tests are best suited for inter school and national comparisms.

From the sample of definitions of standardized achievement test given above, there is a common and important point that standardized achievement tests are most suitable for making wide range comparism of students' academic achievements. To buttress the fact above is the submission by Thorndike and Hagen, (1969). According to them, the word "standardized" in a test title only means that all students answer the same questions and a large number of questions under uniform directions and uniform time limits. There is a uniform and standard reference group to the performance of which a student's performance can be compared. The term standardized does not mean that the test measures what should or could be taught at a particular grade level. This means that standardized tests are not automatically valid but that conscious efforts must be made to ensure their validity.

Standardized achievement tests have certain distinctive features. Gronlund,(1985) summarized the characteristics of a carefully constructed standardized achievement test as follows:

The test items are of high technical quality; they are developed by educational and test specialists; tried out experimentally and selected on the basis of appropriate difficulty,

discriminating power and relationship to a clearly defined and rigid set of specifications. Directions for administration and scoring are so precisely stated that the procedures become standards for different users of the test. Norms (frame of reference for the interpretation of test scores) based on representative groups of individuals are provided as aids in interpreting the test scores. The norms are based on various age and grade groups on a national, regional or state level. Equivalent and comparable forms are provided for a standardized achievement test as well as information concerning the degree to which the forms are comparable. A test manual and other accessory materials are provided as guides for administering and scoring a standardized achievement test, for evaluating its technical qualities, and for interpreting and using the results.

Mehrens and Lehman, (1975) added to the above characteristics that standardized achievement tests employ meticulous construction procedures that include constructing objectives and test blue prints, employing item try outs, item analysis and item revisions.

From the characteristics of teacher made and standardized achievement tests presented above, it is obvious that the standardized tests are of higher quality than the teacher made tests. On the basis of these characteristics, one would suggest that educational decisions should be taken on the basis of results of standardized achievement tests only. However, on the contrary, teacher made achievement test results are also used in educational decision making.

A standardized test is valuable particularly in two kinds of situations (1) A situation in which comparisms need to be made. For example, comparism of an individual's achievement level in different subject matter areas or the comparism of groups or classes taught by different methods. (2) A situation in which there are large number of people about whom decision need to be made, but for which the decision maker has no common or comparable data. For example, a secondary school that admits students from different primary schools will face the problem of

assigning students to classroom groups. The teachers will face the problem of determining the achievement status of individual students so as to plan effective learning activities. All the students entering the school will have marks of some kind from their previous teachers but such marks are difficult to interpret. This is because different criteria may have been used by different teachers in awarding marks to their students. A standardized test can provide such data.

There are different kinds of standardized achievement tests: diagnostic tests which are designed to isolate specific strengths and weaknesses of an individual in some particular field of knowledge; single subject matter achievement tests which are concerned with measuring a pupil's educational accomplishment in a single content area; and survey batteries which consist of a group of tests in different content areas standardized on the same population so that the results of the various components can be meaningfully compared. Mehrens and Lehman, (1975) wrote that all standardized achievement tests are designed to assess pupils' skills and knowledge at a particular point in time. This is true of diagnostic tests, single-subject matter tests or survey batteries, whether they be norm or criterion referenced. However, these tests differ in the extent of content coverage and choice of any of them will depend on the particular purpose for which it is meant to serve. For example, diagnostic tests are primarily concerned with skills or abilities that the subject matter experts believe are essential in learning a particular subject. They therefore, provide a variety of exercises and problems in a somewhat restricted range of instructional objectives. Standardized achievement survey batteries consist of test subsets from different areas but none of the subsets has a detailed content coverage. For example, the arithmetic subset of a survey battery will not have the content coverage of a standardized achievement test specifically on arithmetic. On the other hand, there are standardized

achievement test on specific subjects areas like Geography, Mathematics, Economics, History, etc, which are designed to effectively cover the instructional objectives of the subject matter.

Out of the four examinations under consideration in this research, three are standardized achievement tests in specific subject areas. These are the Senior Secondary Certificate Examination conducted by WAEC and NECO and the Unified Tertiary Matriculation Examination conducted by JAMB. The PUTME test conducted by University authorities across Nigeria has some qualities of an aptitude test, but can best be described as an achievement test since it seeks to establish what a candidate has learnt and to predict his/her future academic performance. It has been customary to contrast achievement test and aptitude tests. However, no distinction between achievement and aptitude tests can be applied rigidly,(Anastasi and Urbina, 2010). Since the PUTME test is not a standardized test, it can best be grouped under teacher made achievement test.

Uses of achievement tests: Sidhu (2005), Anastasi and Urbina (2010) gave the uses of achievement tests as summarized below:

Achievement tests are important for remedial teaching programmes as they are useful in the identification of students with special education disabilities and in the measurement of progress in the course of the remedial work.

For all types of learners, the periodic administration of good achievement tests serves to facilitate learning. Such tests reveal weaknesses in past learning give direction to subsequent learning and motivate the learners.

Achievement test provides a means of adapting instruction to individual needs. Ascertaining what learners are already able to do and what they already know about a subject is the first necessary step for effective teaching and learning.

Achievement test results are used as a basis for planning what is to be taught to the class as a whole and what modifications and adjustments need to be made in individual cases. They also provide information on the adequacy with which content and skills are actually being taught. They can indicate how much of the course content is retained by the learners and for how long. What are the most common errors and misunderstandings encountered? How well can the learners apply their knowledge to new situations? By focusing attention on such questions, achievement tests stimulate an analysis of training objectives and encourage a critical examination of the content and methods of instruction.

Achievement test results provide information with which educational guidance can be provided to the learners. Such results provide information for professional carrier guidance as well as to direct learners away from the fields in which they have little aptitude.

Finally, achievement test results are used in recruitment, selection and promotion of various personnel in army, civil service, private firms and administration. The results are also used for selection of applicants for various courses in institutions of higher learning.

Qualities of a test: A number of authors have stated that a measurement instrument must possess some certain specific characteristics for it to be considered appropriate for any particular use. Sambo et al, (2004) wrote in their book that the process of establishing how good or appropriate a test is requires test constructors to examine the psychometric properties of such a test. Psychometric properties are the technical properties of a test used for measuring mental

abilities and processes. A sample of the views of different authors shows that a good test must possess the qualities of discrimination, comparability, usability, reliability and validity.

Discrimination: According to Hudson, (1973), standardized achievement test are designed to draw distinction between levels of achievement, describing the levels in terms of marks, grades or simply pass/fail. He added that given the need for and the existence of grading schemes in public examination, it is obviously the responsibility of the test experts to make these distinctions as accurately as possible. The quality of discrimination is the ability of a test to separate low achievers from high achievers. This is possible if the marks on the examination are well spread out. A test result that depict all low achievers with low grades or scores and all high achievers with high grades or scores shows that the test has high discriminating power, (Owie, 1997).

Comparability: Comparability of standards in examinations is an important issue in the context of public examination (Hudson, 1973). It is most often associated with standards of different examination bodies. For example, is it easier to get a credit pass in WAEC's SSCE than NECO's SSCE? Or is a credit pass in Mathematics in WAEC the same as in NECO? Apart from comparability between examination bodies, there are other forms of comparability such as comparability between years, between different subjects, between sexes and between modes of examining. The issue of comparability is of paramount importance especially in a system of examination where certificates play a great role in determining an individual's future such as is the case in Nigeria.

Usability: Gronlund, (1985) said in selecting tests and other evaluation instruments, practical considerations cannot be neglected. He highlighted some of the practical issues to be considered as follows:-

Time required for administration: sufficient time should be allocated in administering test to allow for high reliability. An attempt to cut down too much on the time allocated to testing will drastically reduce the reliability of test scores (Gronlund, 1985). There is however, little advantage in allocating much more time to a test than is necessary. A safe procedure is to allocate as much time as is necessary to obtain a valid and reliable result. From the foregoing therefore, it is clear that time allocated to an examination has some influence on the validity and reliability of results. As such, apart from speed tests, sufficient time should be given to examinees. Equal attention should be given to time like the other factors essential for ensuring validity and reliability of tests.

Ease of administration: this is an important quality to seek in a test if tests are to be administered by teachers or others with limited training. For this purpose, the directions should be simple and clear and the subsets should be few. Administering a test with complicated instructions and a number of subsets is tasking even to an experienced examiner. For a person with little training and experience, such a situation is likely to result in errors in giving directions, timing and other aspects of administration that are likely to affect the results.

Ease of scoring: Scoring of a test is one of the most tedious and troublesome aspects of a testing programme. However, recent developments in testing have eased the burden considerably. Such developments include improved clarity in the directions for scoring, use of separate answer sheets and machine scoring.

Ease of interpretation and application: The success or failure of a testing programme is determined by the use of test results. If they are interpreted correctly and applied effectively,

they will contribute to more intelligent educational decisions. On the other hand, if test results are misinterpreted or not applied at all, they will be of little value (Gronlund, 1985).

Cost of testing: Cost of test is relatively unimportant in selecting a test. If two tests are equally good in the aforementioned characteristics, then we should go for that which cost less. However, quality should not be undermined because of cost.

Reliability: This is the second most important characteristic of an evaluation result after validity (Gronlund, 1985). Reliability, according to Adeoye, (2002) is consistency and accuracy of test results. A test result is reliable when subsequent administrations of the test give approximately the same numerical value of the candidates. Anastasi, (1990) gave a more elaborate definition of reliability. She defined it as "the consistency of scores obtained by the same persons when examined with the same test on different occasions or with different set of equivalent items, or under other variable examination conditions". In the words of Nutall and Willmott, (1972), if an examination is given to the same group of candidates on two different occasions, then if the results put the candidates in the same rank order in both cases, the examination should be regarded as reliable.

Gronlund, (1985) and Sambo et al, (2004) gave the characteristics of reliability which are summarized below:

- Reliability focuses on results obtained with an evaluation instrument and not the instrument itself.
- Reliability is not general; it always refers to particular type of consistency. Test scores are reliable over different periods of time, over different samples of questions, over different scores and the like.

- Reliability is a necessary but not a sufficient condition for validity. An inconsistent test result cannot provide valid information about the performance being measured. On the other hand, a highly consistent test result may be measuring the wrong thing.
- Reliability is primarily statistical in nature. It may be expressed as correlation coefficient in the case of shifts in the relative standing of persons in the group, or may be reported by means of standard error of measurement in the case of amount of variation to be expressed in specific individual's score.
- Reliability is better stated in terms of degree (low, average or high reliability) but not categorical (reliable or unreliable).

Validity: A number of authors have expressed the fact that validity is the most important quality of a test. For example, Gronlund, (1985) stated that when one is selecting or constructing an evaluation instrument, the most important question to ask is "to what extent will the results serve the particular uses for which they are intended?" This is essentially a question of validity. Sidhu (2005) stated that validity is the watch world or foundation stone upon which the entire superstructure of testing is based.

Validity refers to the extent to which the result of an evaluation procedure serves the particular uses for which it was intended. It is interesting to note that a test result that is valid for one purpose may not be valid for another purpose. Therefore, the validity of a test cannot be reported in general terms. No test result can be said to have high or low validity in abstract (Anastasi, 1990). Validity of a test can only be determined with reference to the particular use for which the test is being considered.

Hudson, (1973) raised an important issue while commenting on validity of tests. He said to call an examination a mathematics examination does not mean that it is really examining mathematics. It might consist of just arithmetic questions, or alternatively of problems worded in such complicated language that the examination was really measuring the candidates' reading comprehension rather than their mathematical ability. This issue was a major problem to validity of teacher made achievement tests in Nigeria in the 1970s and early 1980s. During this period, teachers (particularly at the secondary school level) worded examination questions in such complicated language that students found the questions very difficult to interpret. Sometimes, they misinterpreted the questions and gave completely wrong answers. Today, however, the clarity of questions in teacher made tests has greatly improved.

Validity is classified into three: content, criterion and construct validity. Each of these is discussed below:

Content validity: This essentially is the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured, (Anastasi, 1990). Such a validation procedure is commonly used in evaluating achievement tests which are tests designed to measure how well an individual has mastered a skill or course of study. To ensure content validity, behavior domain to be tested must be systematically analyzed to make sure that all major aspects are covered by the test items and in the correct proportions. A well constructed achievement test should cover the objectives of instruction, not just the subject matter. Content must therefore be broadly defined to include major objectives such as the application of principles and the interpretation of data, as well as factual knowledge (Anastasi, 1990).

Bloom,(1956) in Bloom, Hastings and Madaus, (1972) developed the taxonomy of educational objectives. He classified educational objectives into three categories as cognitive, affective and psychomotor domains. Most of the Achievement tests (teacher made and standardized) constructed and used in the Nigerian Educational system are concerned with achievement in the various levels of the cognitive domain. As such only the cognitive domain will be considered in this study.

The cognitive domain deals with the mental ability or process of a learner. It is concerned with knowledge and thinking skills. There are six stages of the cognitive domain. These are knowledge, comprehension, application, analysis, synthesis and evaluation in hierarchical order (Sambo et al, 2004). Each of these is briefly discussed below as presented by Gronlund (1985).

Knowledge: This is defined as remembering previously learned material. It involves the recall of wide range of material including facts, theories, definitions, concepts, etc. The learning outcomes include defining, describing, labeling, listing, matching, naming, stating, outlining. Knowledge is the lowest level of cognitive learning outcomes.

Comprehension: This is the ability to grasp the meaning of material. This may be shown by translating material from one form to another, interpreting material and by estimating future trends. Expected learning outcomes include distinguishing, explaining, giving examples, summarizing.

Application: This refers to the ability to use learned material in new and concrete situations. This includes the application of rules, methods, concepts, principles, laws and theories. Learning outcomes include computing, predicting, changing, solving, relating, showing, etc.

Analysis: this is the ability to break down material into its component parts so that its organizational structure may be understood. This includes the identification of the parts, analysis of the relationship between parts, and recognition of the organizational structure involved. Learning outcomes include distinguishing, illustrating, identifying, pointing out, separating.

Synthesis: This is the ability to put parts together to form a new whole. This may involve the production of a unique communication, a plan of operations or a set of abstract relations. Learning outcomes here include categorizing, explaining, rearranging, summarizing, combining.

Evaluation: This is the highest level of the cognitive learning outcomes. It is concerned with the ability to judge the value of material such as statement, novel, poem, for a given purpose. The judgment is based on definite criteria which may be internal or external criteria. Learning outcomes include criticizing, contrasting, relating, supporting and comparing.

Content validity is built into a test from the onset through the choice of appropriate items. For educational tests, the preparation of items is preceded by a thorough and systematic examination of relevant course syllabi and textbooks as well as by consulting with subject matter experts. On the basis of the information thus gathered, test specifications are drawn up for the item writers. These specifications show the content areas or topics to be covered, the instructional objectives or processes to be tested, and the relative importance of individual topics or processes.

In discussing content validity, it is important to consider the term “face validity”. Anastasi, (1990) stated that face validity is not validity in the technical sense. It does not refer to what the test actually measures, but to what it appears superficially to measure. Although a test should look like an appropriate measure so as to obtain the co-operation of those taking the test, face validity should not be considered a substitute for content validity (Gronlund, 1985).

A widely used procedure for establishing content validity is the use of a two way chart called a table of specifications (Gronlund, 1985). The content of a course or curriculum may be broadly defined to include both content of subject matter and instructional objectives. The content of the subject matter is concerned with the topics to be learned and the objectives with the type of performance pupils are expected to demonstrate (example, knowledge, comprehension, application, etc). We would like any achievement test we construct to provide results that are representative of both the content area and the objectives we wish to measure (Gronlund, 1985). A table of specification is a chart that aids in obtaining a sample of test tasks that represent both domains. Below is an example of a table of specification

Table 2.01: *Table of Specifications*

	Instructional objectives			
CONTENT AREA	KNOWS CONCEPTS	COMPREHENDS CONCEPTS	APPLIES CONCEPTS	TOTAL
Plants	8	4	4	16
Animals	10	5	5	20
Weather	12	8	8	28
Earth	12	4	2	18
Sky	8	4	6	18
Total	50	25	25	100

Extracted from Gronlund, N.E, (1985), Measurement and Evaluation in Teaching.

Criterion related validity: This indicates the effectiveness of a test in predicting an individual's behavior in specified situations (Anastasi, 1990). For this purpose, the performance in the test is checked against a criterion, that is, a direct and independent measure of that which the test is

designed to predict. Thus for a mechanical aptitude test, the criterion might be subsequent job performance as a machinist, for scholastic aptitude test, it might be the cumulative grade point (CGP) obtained in a higher institution. Criterion related validity is further classified into two: predictive and concurrent validity. The criterion measure against which test scores are validated may be obtained at approximately the same time as the test scores or at a stated interval. The 1985 Testing Standards differentiate between the concurrent and predictive validity on the basis of the time relation between the criterion and the test (Anastasi and Urbina, 2010). Concurrent validity relates performance to current measures. In this case the predictor and the criterion data are obtained concurrently. Thus the test scores of employees may be compared with their current job success. Predictive validity relates performance to future measures. Example, students' scores at SSCE can be compared with their CGPA in institutions of higher learning.

Construct validity: This is the extent to which a test may be said to measure a theoretical construct or trait (Anastasi, 1990). Common examples of constructs are intelligence, scientific attitude, critical thinking, reading comprehension, study skills and mathematical aptitude. Whenever we want to interpret test performance in terms of any of the psychological constructs listed above, we are concerned with construct validity. Construct validity is of importance in all types of testing- achievement, aptitude, personal social development. The focus of this research is on predictive validity of achievement test scores.

Factors affecting the validity of a test

There are a number of factors that can affect the validity of a test result. Some of these factors as presented by Sidhu,(2005) are given below:

Clarity of directions: when the directions clearly indicate to the examinee how to respond to the items, how to record the responses, etc, the validity of the test result will improve.

Language: if the vocabulary and the sentence structure used in writing test items are not unnecessarily complicated, it will make the test valid. On the contrary, the examinee might know the answer to the questions but fail to answer correctly simply because he/she does not understand the language of the test items. For example, a test in physics which uses difficult language may actually be measuring reading comprehension and not achievement or ability in physics.

Difficulty level of the items: test items which are either too simple or too difficult will not discriminate between low achievers and high achievers. A test that does not discriminate between different levels of achievers cannot be valid.

Time limits: if the time limit given in an achievement test is inadequate, the fast writer will have advantage over the slow writer. Instead of measuring achievement the test will measure the speed of writing. If on the other hand ample time is given in a speed test where time is the most important factor, it will invalidate the result. The safe thing to do is to give just enough time for a particular kind of test.

Extraneous factors: sometimes examiners are influenced by such factors as style of expression, method of organizing the subject matter, good handwriting, etc. Such factors lower the validity of achievement tests. The practice of deduction of marks for rough presentation of answers or for

poor handwriting is example of giving undue consideration to extraneous factors which affect test validity.

In addition to the above factors, examination malpractice on the part of examinees can have serious effects on the validity of test results. Such results can hardly provide authentic information about the attribute being measured.

2.2.2 The concept of academic performance

Teaching and learning are carried out with the aim of imparting specific skills and knowledge on the learners. Therefore, at the end of a course of study, learners are expected to have acquired certain skills and knowledge as indicated by the objectives of the programme of study. Thus, academic performance is defined as the amount of learning that has taken place either at the completion or at some given level of a course of study. The free encyclopedia (2013) defines academic performance as the outcome of education- the extent to which a student or teacher or institution has achieved their educational goals.

Academic performance is not uniform across a group of learners. A number of factors combine to determine the academic performance of learners. These factors are classified into two: environmental and biological factors (Bossaert and Doumen ,2011). Olubadewo, (2005) stated that the provision and maintenance of school facilities can have serious effects on academic performance or outcomes. This means if school facilities are adequately provided and maintained, the level of academic performance will be high and vice versa. This is an environmental factor. Other environmental factors include the living environment of the learners such as crowded homes and the socio economic and educational status of parents. Parents of high socio economic and educational status influence their children's academic achievement by shaping their skills, beliefs and attitudes towards school through the kind of environment they

live in and the discourse they have with the children. Another environmental factor that affects academic achievement is the presence of physical activities. Studies have shown that physical activity can increase neurotic activity in the brain. Exercise particularly, increase executive brain function such as attention span and working memory (Philip, Davies, Miller and Nagrieri, 2008). Early Childhood Care and Education (ECCE) have also been found to have significant effect on a child's later academic achievement. Kwankwaso (2013) writing on ECCE defined it as a distinct form of education at the primary level which involves activities for children from the ages of 3-6 years. It is aimed at equipping the children with the basic skills of reading, writing and simple arithmetic. Developmental Psychologists found this kind of education to have great influence on the children's values, norms and beliefs as well as their later academic performance

The level of intelligence of learners is a biological factor affecting academic performance. Students with high mental ability as indicated by IQ tests are high academic achievers and vice versa. The amount of interest that a learner has in a particular course of study or subject area also influences his/her academic performance, (Philip, et al, 2008).

Academic performance is measured by the use of tests. High scores in a test is an indication of high academic performance and vice versa. However, a major problem facing the conduct of credible examinations has posed a threat to the authentic measurement of academic performance. This is the problem of examination malpractice. Ebel, (1965) defined examination malpractice as an activity of a student or group of students whose purpose is to give any of them higher grades than is likely on the basis of their own achievements. He mentioned some of the activities regarded as examination malpractice to include;

- The side long glances at a fellow student's answers.

- The preparation and use of crib sheets.
- Collusion between two or more students to exchange information on answers during the examination.
- Stealing or buying copies of examination question papers before the test is given or sharing such elicit advanced copies with others.
- Arranging for a substitute to take the examination.

All these forms of examination malpractices are common in the conduct of SSCE and UTME. Ebel, (1965) blamed emphasis on grades as primary cause of examination malpractice. The Nigerian society puts premium on paper qualification; as such people are desperately looking for the paper qualifications. The Universities and other tertiary institutions where these qualifications are obtained require candidates to possess certain minimum grades in a number of subjects and a given cutoff mark in the UTME and PUTME screening test (in the case of Universities) for them to be given admission to read their courses of choice.

Examination candidates often resort to all forms of examination malpractices as a way of obtaining the grades that will fetch them admission into tertiary institutions. Afemikhe, (2005) stated that there are “miracle centers” for most of the public examinations conducted in Nigeria. Miracle centers produce excellent results for candidates who do not have the knowledge of the subject matter. This could be the reason why candidates were given admission on the basis of their excellent grades in the entry qualifications but could not cope academically in such institutions. For now, there has not been any report of examination malpractice in the conduct of the PUTME screening test. Again, University candidates have began to realize that obtaining the academic requirements for admission into the Universities (SSCE and UTME) through dubious means is no more adequate to gain University admission. They also have to pass the PUTME

screening test which is based on the knowledge they have acquired. Many are beginning to sit up and read so as to pass the SSCE, UTME and PUTME test. As a result, one would expect high correlation between the post UTME test scores and subsequent performance in institutions of higher learning. But this has to be determined empirically.

2.2.3 The concept of predictive validity

Predictive validity is concerned with determining future performance of an individual. According to Sambo et al, (2004), a test which yields scores that are found to be highly correlated with examinees' later behavior has high predictive validity. It refers to the extent to which a test can be used to tell whether a student will be successful at the end of a programme or not. Two scores are involved here: the predictor and the criterion. For example, students' University entrance examination score (predictor) may be compared statistically with their final CGPA (criterion) on graduation. This will show how well the entrance examination score has indicated success at the University.

Predictive validity of tests is applicable both within and outside the field of Education. In the field of Education, entrance examination is normally administered on candidates intending to enter secondary schools; the results are used in predicting the success of those to be admitted. At the junior secondary school (Upper basic), students are exposed to all subjects as a matter of compulsion. At the end of the first three years of the secondary education, a test is administered to determine those that will excel in science related courses and those that are suitable for courses in humanities. At the end of the last three years of secondary education, the Senior Secondary Certificate Examination is administered on students to select those that will cope with University Education and other institutions of higher learning. The CGPA obtained at the end of first degree courses is used for admission into Masters Programmes. The CGPA obtained at

masters level is in turn used for admission into the doctoral courses. The basic assumption is that candidates with high CGPA will cope in their respective courses of study in the next higher level of learning. Writing in this regard, Anastasi and Urbina (2010) stated that every educational test score has a past that need to be explored for proper understanding of the individual who obtained it. The same test score also has a future, insofar as it permits some prediction of what the individual will do in other non test situations, as well as at some future time.

Outside the field of education, corporate organizations normally administer aptitude tests on applicants as part of employment procedure. The success of the applicant in the aptitude test is an indication that the applicant will succeed as an employee of the organization. The decision to introduce aptitude test as an employment procedure was informed by the failure of the grades in certificates of applicants to reflect in their job performance. Tests are also administered to predict the success or otherwise of potential recruits in the military profession.

In summary, the information provided by predictive validity is most relevant to tests used in the selection and classification of personnel, selecting students for admission into institutions of higher learning and professional schools as well as assigning military personnel to occupational training programmes.

However, studies have shown that there are means of predicting performance other than tests. Stein and Bloom, (1956) in Babangida, (2008) pointed out that in many cases, students whose test results indicated high probability of achievement, nevertheless failed in their academic efforts. Therefore, they suggested that greater importance should be attached to such factors as motivation, interests and the likes. Cronbach, (1970) argued that a school selects students on the basis of academic performance, rejects students with fair academic promise who are outstanding

along other lines. He added that measures of interest in a particular course of study predict more than measures of performance on admission. The view points on measures of interest expressed above, not withstanding, institutions of higher learning have continued to rely on test results for selection of candidates for admission. This means test results still remain the best and most reliable means of determining a learner's future performance. However, examination malpractice continues to be a major problem to predictive validity of test results.

Combining information from different tests for the purpose of prediction

For the prediction of practical criteria, not one but several tests may be required. Most criteria are complex, the criterion measure depending on a number of different traits. As such, it is often preferable to use a combination (composite score) of several relatively homogeneous tests results, each covering a different aspect of the criterion (Anastasi and Urbina, 2010).

When a number of specially selected tests are employed to predict a single criterion, they are known as test battery. The main problem arising in the use of such batteries concerns the way in which scores on the different tests are to be combined in arriving at a decision regarding each individual. The procedures followed are of two major types, namely, multiple regression equation and profile analysis.

Multiple regression equation: The multiple regression equation yields a predicted criterion score for each individual on the basis of his/her scores on all tests in the battery. The following regression equation illustrates the application of this technique in predicting a student's achievement in high school mathematics course from his/her score on verbal (V), numerical (N) and reasoning (R) tests. Maths Achiev= .21V+.21N+.32R+1.35. In this example, the test scores and the criterion score are expressed as stanines. On the stanine scale, scores are converted from other units to a maximum of nine (9). In the above equation, the student's stanine score on each

of the three tests is multiplied by the corresponding weight given. The sum of these products plus a constant (1.35) gives the student's predicted stanine position in mathematics course.

Suppose a student obtained the following stanine scores: verbal=6, numerical=4 and reasoning=8, the estimated mathematics achievement of the student is found as follows: Math Achiev= (.21)(6)+(.21)(4)+(.32)(8)+1.35=6.01. A stanine of 5 represents average performance and so the student with the score illustrated above is expected to perform above average in the mathematics course.

Profile analysis and cutoff marks: This procedure involves the establishment of a minimum cutoff score on each test. When this method is applied, any person who falls below the minimum score on any one of the tests is rejected. In this research, cutoff marks are established in the UTME and PUTME test scores for admission into University programmes. The marks obtained in these tests by those admitted into the University will be combined with their grades in the SSCE and correlated with their 100-level CGPA to determine how effective a combination of these tests results predict University achievement.

2.3 Theoretical framework

A number of theoretical approaches have been developed by psychometricians over the years for the purpose of construction and analysis of test items of various kinds of tests so as to improve on their validity and reliability. For this research, the Item Response Theory (IRT) provides a theoretical support and is hereby reviewed.

The IRT also known as latent trait theory, strong true score theory or modern mental test theory, is a pattern for the design, analysis and scoring of tests, questionnaire or similar instruments measuring abilities, aptitudes and other variables (Thissen and Orlando, 2001). The name Item

Response Theory is as a result of the focus of the theory on test items. This should not be misconstrued that the theory is not concerned with the total score on a test. The summation of the examinees' performance on individual test items gives the total score on the test. The emphasis on test items is to ensure that each item is fit for the test and possesses the appropriate psychometric properties so as to ensure a valid overall test result. A fundamental feature of this approach is that item performance is related to the estimated amount of the respondent's "latent trait" symbolized by θ. The latent trait is a given level of the innate ability of an examinee. Persons with lower ability have less of the chance of answering an item correctly while persons with high ability are more likely to answer correctly. For example, a candidate with high mathematics ability is more likely to respond correctly to a mathematics test item than a candidate with low mathematics ability.

Assumptions of the theory

1.A single common trait for the examinees called ' latent trait'.

2.Local interdependence of items, meaning the items are not related except that they measure the same trait.

3.The response of a person to an item can be modeled by a mathematical Item Response Function (IRF).

The Item Response Function (IRF) gives the probability that a person with a given ability level will answer an item correctly. The exact value of the probability depends, in addition to ability, on a set of item parameters. For example, in a three parameter logistics (3PL) model, the probability of a correct response to an item is given by the function below:

$$P_i(\theta) = C_i + \frac{1 - C_i}{1 + C^{-ai(\theta - bi)}}$$

Where θ is the person (ability) parameter and a_i, b_i and c_i are the item parameters. The item parameter a_i represents the discrimination of the item: that is the degree to which an item discriminates between persons in different regions on the latent continuum. The parameter b_i represents the item location which, in the case of attainment testing, is referred to as item difficulty. For multiple choice items, the parameter c_i is used in attempt to account for the effect of guessing on the probability of a correct answer (Thissen and Orlando, 2001).

A major proponent of the IRT is the Danish Mathematician, George Rasch. The Rasch model is often considered to be a one parameter logistic (1PL) model. A one parameter logistic model assumes that guessing is part of the ability and all items that fit the model have equal discrimination, so that items are described by a single parameter- b_i which is the item difficulty. The model emphasizes the primacy of the requirements for fundamental measurement, with adequate data model fit being an important but secondary requirement to be met before a test or research instrument can be said to measure a trait. The first requirement is that the test items and the examinees conform to the model before claims regarding the presence of a latent trait can be considered valid.

From the facts above, it is evident that the IRT provides a sound framework for ensuring the validity of a test as well as the effectiveness of test items in separating low achievers from high achievers if its principles are applied in test construction. University authorities require that candidates seeking admission into the various University courses must sit for the certification and selection examinations under consideration in this research. Not only that, such candidates

are expected to obtain certain minimum grades in the certification examinations and a given level of scores (cutoff marks) in the selection examinations. The assumption is that candidates with the required grades in the certification examinations and who have obtained the cutoff mark in the selection examinations will cope well in their University programmes. Only a valid test and that in which the test items discriminate between low and high achievers will ensure effective selection of candidates for University courses. The non application of the principles of the IRT in test development in Nigerian Education system may be a partial explanation for the low, or in some cases negative correlation between entry requirements and University achievement that has been recorded in the past across various Universities in Nigeria. Anastasi and Urbina (2010) stated that the IRT is gradually being incorporated in large scale testing programmes. The examination bodies conducting standardized achievement tests in Nigeria should follow suit in embracing the principles of the IRT in test construction to further enhance the quality of their examinations as well as improve on the predictive validity of their examination results.

2.4 Review of empirical studies on variable one (Certification Examinations).

Variable one in this research is the Senior Secondary Certificate Examination (SSCE) conducted by WAEC and NECO. A number of studies have been carried out on SSCE as predictor of academic performance in various institutions of higher learning. The results obtained in these researches never indicated any particular trend. While some research results showed significant relationship between the predictor (SSCE results) and the criterion (CGPA) obtained in institutions of higher learning, others showed no significant relationship between the predictor and the criterion. For instance, a study carried out on the predictive validity of students' entry qualification on performance in IJMBE at Kano State College of Arts and Science by Sumaila, (2005) revealed that there was no significant relationship between students' entry qualifications

(NECO SSCE) and performance in IJMBE. In this research, the data collected showed that students with high grades in NECO's SSCE ended with low grades at the end of the IJMBE programme while others with low grades in SSCE ended with high grades at IJMBE. He concluded that entry qualifications are not in themselves the determinant of future success in academics, but rather extra effort of the students and the environment in which they learn. Similarly, Umar, (2006) found no significant relationship between entry qualification (WAEC and NECO's SSCE) and performance at Kano State College of Education, Kumbotso for the students that graduated during the 2002/2003 and 2003/2004 academic sessions.

If the results obtained in the researches stated above are universally applicable across institutions of higher learning in the country, there would have been a strong need for an investigation into the causes of the disparity between SSCE results and subsequent performance. Educational experts strongly believe that a relationship exist between the two. Researchers that came up with the above results concluded that SSCE and other entry qualifications are not good predictors of subsequent performance. Therefore, emphasis should be placed on interest of the students, changes in the socio economic status and educational attainment of parents as better predictors of academic performance.

However, a research conducted by Downes, (1976) found secondary school performance in Economics and Mathematics significant in explaining first year performance in the University. Yusuf, (2004) reported that examination/test have been identified as the best measure of students performance and is used for selection, placement, determination of students special abilities and difficulties as well as prediction. In another development, a research carried out by Atsua, (2008) on predictive validity of SSCE on students' performance in institutions of higher learning in Kano State showed that NECO's SSCE is better in predicting students' performances than

WAEC's SSCE. This is contrary to the research findings by Sumaila, (2005) which revealed that WAEC's SSCE predicts students' performance better than NECO's SSCE.

On the basis of the discussion above, we can state that the SSCE is to some extent useful in predicting performance, but cases of examination malpractices and changes in environmental factors are possible explanations to poor prediction of academic performance by the SSCE as recorded in some cases.

2.5 Review of empirical studies on variable two (Selection Examinations)

Variable two is the selection examination for tertiary institutions. These are the UTME and the PUTME screening test. Most of the researches conducted on prediction of academic achievement are centered on the SSCE as the predictor. However, a number of researches have also been carried out on the UTME and the PUTME screening tests as predictors of academic achievement. For example, the Nigerian Educational Research and Development Council (NERDC) conducted a research on the predictive validity of public examinations (WAEC, NECO, NABTEB and UTME) on University students' achievement and found these public examinations as poor predictors of academic achievement. Another research by Ogonor and Olubor, (2002) on Matriculation Examination as predictor of undergraduates overall grading in a Nigerian University revealed that the University Matriculation Examination (UME) now modified and called UTME was inversely related to undergraduates overall grading in the University. The study revealed that over 50% of the undergraduates of the 1995/96, 1996/97 and 1997/98 academic session passed in second class lower division irrespective of students' score in the Matriculation Examination. Again, first class was not restricted to the category of students with highest scores in the Matriculation Examination. The outcome of this research by Ogonor and Olubor (2002), is in agreement with the results obtained by the NERDC on research

involving UTME and other public examinations. The researchers therefore, recommended that evaluation experts should devise a more appropriate entrance examination into Nigerian Universities.

In another research conducted by Ifedili and Ifedili, (2010) on assessment of UTME and PUTME results as predictors of University achievement, the outcome showed that both the UTME and the PUTME screening test are poor predictors of students' University performance. However, the results showed that the PUTME test predicts students' performance better than the UTME. The results showed that among the students that were admitted for the 2004/05 academic session (that is the last set to be admitted into the University on the basis of the UTME only), 14.23% passed all their first year courses, 66.94% had carryovers while 18.80% were on probation. For those that were admitted during the 2005/06 academic session (that was the first set to be admitted on the basis of the UTME and PUTME screening test) 39.65% passed all their first year courses, 53.80% had carryovers while 6.55% were on probation. The facts above show that there was an improvement in performance of first year students in the University as the PUTME was introduced compared to the previous year. However, in each of the admission exercises stated above, less than 50% of the students coped well during the first session of their academic work. Surprisingly, a certain percentage of them were on probation. If the UTME and PUTME screening test were good predictors of academic performance, a larger percentage of those admitted would have coped well academically with a small percentage having cases of carryovers which could be attributed to environmental and other factors.

2.6. Review of empirical studies on variable three (CGPA)

Variable three is the cumulative grade point average (CGPA). A student's CGPA at any point in time during a University programme shows how well or otherwise the student is coping

academically. Universities and other institutions of higher learning such as Colleges of Education, Polytechnics and others make use of the CGPA in the final grading of students. While the Universities grade students as first class, second class upper, second class lower, third class and pass degrees according to their final CGPA, other institutions of higher learning use the same basis to grade students as distinction, upper credit, lower credit, merit and pass. Most of the researches conducted on prediction of students' performance in institutions of higher learning showed no significant correlation between the entry qualification and the CGPA obtained in institutions of higher learning. Example, Majasan and Bakare (1984) carried out a study on predictive validity of Ibadan University entry qualifications-Higher School Certificate (HSC) and General Certificate of Education, advanced level (GCE A-Level) on first year and final year performance and found low correlation between results of entry qualifications and CGPA obtained at those levels of the University programme. Similarly, the research by Umar, (2006) revealed no significant relationship between the CGPA obtained at College of Education, Kumbotso and the entry qualifications for the 2002/03 and 2003/04 academic sessions. The data used for the research showed students with average performance in the entry requirements but high CGPA on graduation,

In another research by Atsua, (2008) on the predictive validity of WAEC/NECO's SSCE on academic achievement in institutions of higher learning in Kano State, no significant relationship was found between the results of entry qualifications and the CGPA obtained in those institutions of higher learning. The data for the research showed students with low grades in the entry qualification but with high CGPA on graduation. While others with high grades in the entry qualifications graduated with low CGPA.

Several factors may be responsible for the trend described above. Example, those with high grades in entry requirements but with low CGPA on graduation may have obtained the results of the entry requirements through some dubious means. In other cases, unfavorable environmental conditions may have set in such as loss of sponsorship and other forms of motivation. Those with low grades in the entry qualifications but with high CGPA on graduation may have received greater motivation as a result of positive change in socio economic status of parents or sponsors, or as a result of interaction with other students. With these events, educational decision makers will have to look beyond the results of entry qualifications as the only requirement for admission into institutions of higher learning.

However, other researchers found significant relationship between entry qualifications and CGPA. Example, Downes, (1976) found secondary school performance in Economics and Mathematics significant in explaining first year performance in University. On the general note, most researchers found no significant relationship between CGPA and results of entry qualifications. This may explain the several changes in the requirements for gaining admission into the Universities over time. Educational decision makers have to do something fast to change the trend where results of achievement tests have consistently failed to predict subsequent performance.

2.7 Summary and uniqueness of study

Measurement and evaluation are what we do every day. A test is one of the measurement instruments and is used in the field of education to measure academic achievement and to predict performance. Over the years, results of standardized achievement tests have failed to predict performance as indicated by research outcomes. Most of these researches were conducted on WAEC and NECO results as predictors of academic performance, example, Sumaila (2005),

Umar (2006), Atsua (2008). A few others centered on the UTME and PUTME, example, Ifedili and Ifedili (2010). These research outcomes depicted the academic requirements for admission as poor predictors of academic performance. These research outcomes are contrary to the tenets guiding the establishment of these examinations. Since some of these examination bodies have identified problems in the general conduct of the examinations and have been making efforts to end such problems, it is not out of place to conduct a current research to ascertain the outcome of such efforts.

In addition to the above, the researches reviewed never attempted to combine a number of test results of the entry qualifications to see if such combination was significant in predicting academic performance. In this research, various combinations of test results were made (WAEC and NECO, UTME and PUTME as well as WAEC, NECO, UTME and PUTME) and the combined results correlated with candidates' CGPA scores. This is an aspect that has not been covered by any of the previous researches.

Finally, no previous research has combined these entire academic requirements for admission into higher institutions of learning in a single study. So it is hoped that the study will contribute something new to the existing body of knowledge.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The research was a study of the academic requirements for admission as predictors of academic achievement. This chapter presents the methodology of the study under the following headings: Research design, population and sample, data collection instruments, data collection procedure and data analysis procedure.

3.2 Research design

There are a number of research designs for use in educational researches depending on the nature of the problem under investigation. Examples are the experimental, historical, descriptive and the

Ex Post Facto research designs, among others. This study has an Ex Post Facto design. Ex Post Facto means 'from what is done afterward'. It is concerned with determining the impact of the independent variable(s) on the dependent variable as the researcher does not have the liberty to manipulate the variables. This research is a correlational research. Correlational researches try to establish if there is a relationship between two or more variables, as well as the direction and strength of the relationship. Bichi,(2004) said correlational researches are concerned with the extent to which two variables are related and, therefore, can be used as predictors of each other.

In this research, efforts were made to establish if there was a relationship between the CGPA obtained at Bayero University, Kano and the selection examinations (UTME and post UTME tests) as well as the Senior Secondary Certificate Examination (SSCE) by WAEC and NECO.

3.3 Population and sample

3.3.1 Population of the study

Bichi,(2004) wrote that the term population is used in research in a specialized sense to refer to all possible objects of a particular type as defined by the aims and objectives of the study. This need not necessarily be people; it could be events, things or even ideas. The population of this study was the 100 – level undergraduates of the 2009/2010, 2010/2011 and 2011/2012 academic sessions at Bayero University, Kano. A total of eighteen thousand, four hundred and twenty one (18,421) students registered for 100 – level courses for the period under review. Out of this number, eleven thousand, three hundred and seventy seven (11,377) were male students, seven

thousand and forty four (7,044) were female students, (Obtained from MIS Dept. Bayero University, Kano.)

In terms of course of study, there were three thousand, eight hundred and fifty one (3,851) students in the Art related courses that is Law. Education and Art and Islamic Studies. In the Sciences (Science, Medicine, Technology and Agriculture), there were eleven thousand, seven hundred and sixty seven (11,767) students and in the Social Sciences, there were two thousand, eight hundred and three (2,803).

Table 3.01: *Distribution of Population according to Gender, Course of study and Year of Admission.*

ACADEMIC SESSION	TOTAL NUMBER OF 100 - LEVEL STUDENTS	TOTAL NUMBER OF MALE STUDENTS	TOTAL NUMBER OF FEMALE STUDENTS	TOTAL NUMBER IN SCIENCE COURSES	TOTAL NUMBER IN ART COURSES	TOTAL NUMBER IN SOCIAL SCIENCES
2009/2010	6,268	4,183	2,085	3,820	1,465	983
2010/2011	5,861	3,368	2,493	4,025	1,102	734
2011/2012	6,292	3,826	2,466	3,922	1,284	1,086
TOTAL	18,421	11,377	7,044	11,767	3,851	2,803

Obtained from MIS Dept. Bayero University, Kano (2014).

Table 3.02: Characteristics of the population

Characteristics	Male	Female	Science	Soc. Science	Arts
Gender	11,377	7044			
Course of Study			3922	2803	3851
Ages	Ranges between 16 years and 52 years				
Ethnic background	70% Hausa / Fulani and 30% other ethnic groups				

3.3.2 Sample size: Maiwada and Yakasai, (2010) stated that there are two ways in which a researcher can determine sample size: one is by the researcher exercising prudence and ensuring that the sample represents the wider features of the population with the minimum number of

cases, and two, by using tables which, from mathematical formula, indicates the appropriate size of random sample from a given number of the wider population. In this study, 361 students were selected from each of the three academic sessions under review, bringing the total sample for the research to 1,083. The sample was made up of 658 Males, 425 Females, 691 Science Students, 169 Social Science students and 223 Art students. The range of ages of all the students was between 16 years and 52 years.

Table 3.03: *Sample Distribution of the Population.*

ACADEMIC SESSION	100-LEVEL STUDENTS	MALE STUDENTS	FEMALE STUDENTS	SCIENCE STUDENTS	ART STUDENTS	SOCIAL SCIENCE
2009/2010	361	241	120	220	83	58
2010/2011	361	207	154	248	68	45
2011/2012	361	210	151	223	72	66
Total	1,083	658	425	691	223	169

Obtained from table 3.01 using a table for sample selection.

3.3.3 Sampling technique: Stratified random sampling technique was used in selecting the sample to ensure fairness in representation and reduce sampling error. The population was classified into three broad groups as Arts, Social Sciences and Sciences. These broad groups were further classified into departments with the number of males and females in each department taken note of. Sampling actually took place in the files' office. For each set of files, the male and female files were separated to ensure that the appropriate sample size for each category was selected. The total sample to be selected from each of the departments was already set out including males and females according to the proportion of students in a given department as a fraction of total sample in the faculty. Total number of files were counted and divided by the sample size to be drawn. Then every nth file was picked out from the pack until the required sample size was selected.

Table 3.04: Classification of population for sample selection

Category	2009/2010	2010/2011	2011/2012
Science	3820	4025	3922
Social Science	983	734	1086
Arts	1465	1102	1284
Male	4183	3368	3826
Female	2085	2493	2466

Obtained from table 3.01 above

3.4 Data collection instrument(s)

The nature of data needed for this research does not require the development and use of such instruments as questionnaire, interviews, observational guides or tests. The required

Data is readily available in form of records, which only needed to be accessed. According to Bichi, (2004), choice of data collection instruments depend on factors like appropriateness, availability, comprehensiveness, cost, convenience, nature of the respondents and time available, among others. For the purpose of this research and based on convenience, a simple data collection format was developed and used in data collection.

3.5 Validation of the instrument(s)

As stated earlier, there was no data collection instrument to be used for data collection in this research. The data collection format used needed no validation. This is because it was not to be administered on the sample of population selected. The researcher himself filled the data

collection format from available data. Therefore, there was no need for determination of reliability and validity.

3.6 Data collection procedure

The researcher obtained permission from the Director, Directorate of Examinations, Admissions and Records (D.E.A.R) of Bayero University, Kano, to access the required data and select a sample of the population for the study. Both the SSCE and UTME results were available in students' files. The required files were accessed in the file office and the details of the results were copied down on the data collection proforma. (See Appendix Three). The PUTME results were available on computer records. This had to be copied on compact disk (CD) for the researcher before it was later printed out. The results of the sampled students were then copied on the data collection proforma. The CGPA on the other hand was available in booklets. The researcher was allowed to photocopy the relevant sections of the results which were later used to complete the relevant sections of the data collection proforma by the researcher himself.

3.7 Data analysis procedure

The SSCE, UTME and PUTME screening test scores were not of the same type as the CGPA. Therefore, the first step was to summarize and convert these scores to the same unit as the CGPA. To convert the SSCE grades to the required scores, the following scores were allocated to the various grades: F9=0, E8=1, D7=2, C6=3, C5=4, C4=5, B3=6, B2=7, A1=8. If a candidate sat for nine subjects, the maximum score was 8×9=72. Therefore, to convert the candidate's score, the procedure was (Score obtained ÷ 72) × 5. For the UTME, the maximum score is 400. Therefore, to convert the score of a candidate, divide the score obtained over 400 and multiply by 5. In the case of PUTME, the maximum score is 100. The conversion was the score obtained by a candidate divided by 100 and multiplied by 5. The composite scores of these examinations

were obtained and used in data analysis. The Pearson's Product Moment Correlation Coefficient was used to test the relationship between students' scores in SSCE, UTME and post UTME on one hand and the CGPA obtained at 100 – level courses on the other hand. After this, the scores in SSCE, UTME and post UTME of each of the candidates were summarized into single scores and correlated with their 100-level CGPA. This method is suitable for large amount of data and is one of the most widely used statistics for determining relationships. The justification for the use of this statistical tool for data analysis is the fact that the data collected is interval and continuous. The t-test for difference was also conducted to determine if there was a difference in performance in the examinations under review on the basis of gender.

CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In this chapter, data collected was analyzed and presented. Also presented here are a summary and discussion of findings of the research.

4.2 Data Presentation

The data used in this research was numerical in nature except for the SSCE which had to be converted from the various grades to a numerical form to conform to the UTME, PUTME and CGPA scores for easy analysis. The data was on a sample of 100- level students of Bayero University, Kano and contained WAEC, NECO, UTME and PUTME results. The records were

obtained from the Directorate of Examinations, Admissions and Records (D,E,A,R) of the Bayero University, Kano.

Table 4.01: *Summary of Data on each variable in frequencies for the Three Academic Sessions.*

VARIABLE	2009/2010	2010/2011	2011/2012
WAEC	248	245	270
NECO	172	227	132
UTME	361	361	361
PUTME	361	361	361
MALE	241	205	217
FEMALE	120	156	144
SCIENCE	220	248	223
SOCIAL SCI	58	45	66
ART	83	68	72

4.3 Data analyses

Eleven null hypotheses were tested separately from the data collected on each of the three academic sessions under consideration in this research. This was to enable the researcher to observe any trends in the behavior of the variables across the three academic sessions. In each case, the degree of freedom was df=N-2 at .05 level of significance

4.3.1 Hypotheses Testing

2009/2010 academic session

H_{O1} There is no significant relationship between WAEC results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the relationship between WAEC results and CGPA. The outcome is shown in the table below.

Table 4.02: *Pearson Product Moment Correlation of WAEC results and CGPA scores at BUK*

Variable		**WAEC**	**CGPA**
WAEC	Pearson correlation	1	-.070
	Sig.(2-tailed)		.269
	N	248	248
CGPA	Pearson correlation	-.070	1
	Sig.(2-tailed)	.269	
	N	248	248

Sample Mean=2.5960, Sample Standard Deviation=1.04089

From the table above, the calculated value of the PPMC is smaller than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between WAEC results and CGPA scores at Bayero University, Kano.

H_{O2} There is no significant relationship between NECO results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the relationship between NECO results and CGPA.The result is presented on the table below.

Table 4.03: *Pearson Product Moment Correlation of NECO results and CGPA sscores at BUK*

Variable		**NECO**	**CGPA**
NECO	Pearson correlation	1	.086
	Sig.(2-tailed)		.260
	N	172	172
CGPA	Pearson correlation	.086	1

	Sig.(2-tailed)	.260	
	N	172	172

Sample Mean= 2.1963, Sample Standard Deviation=1.06150

From the table above, the calculated value of PPMC is smaller than the level of significance. Therefore, we retain the null hypothesis and conclude that there is no significant relationship between NECO results and CGPA scores at Bayero University, Kano.

H_{O3} There is no significant relationship between SSCE results (WAEC & NECO combined) and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used in test of the hypothesis and the outcome is presented on the table below.

Table 4.04: *Pearson Product Moment Correlation of SSCE results and CGPA scores at BUK*

Variable		**SSCE**	**CGPA**
SSCE	Pearson correlation	1	-.080
	Sig.(2-tailed)		.127
	N	361	361
CGPA	Pearson correlation	-.080	1
	Sig.(2-tailed)	. 127	
	N	361	361

Sample Mean= 2.5899, Sample Standard Deviation= 1.84376

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between SSCE results and CGPA scores at Bayero University, Kano.

H_{O4} There is no significant relationship between UTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used in testing this hypothesis and the result is as presented on the table below.

Table 4.05: *Pearson Product Moment Correlation of UTME results and CGPA scores at BUK*

Variable		**UTME**	**CGPA**
UTME	Pearson correlation	1	.120
	Sig.(2-tailed)		.823
	N	361	361
CGPA	Pearson correlation	.120	1
	Sig.(2-tailed)	.823	
	N	361	361

Sample Mean= 2.8114, Sample Standard Deviation= 1.89227

From the table above, the calculated value of the PPMC is smaller than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between UTME results and CGPA scores at Bayero University, Kano.

H_{O5} There is no significant relationship between PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used in testing the hypothesis and the result is presented on the table below.

Table 4.06: *Pearson Product Moment Correlation of PUTME results and CGPA score at BUK.*

Variable		**PUTME**	**CGPA**
PUTME	Pearson correlation	1	.145
	Sig.(2-tailed)		.006

	N	361	361
CGPA	Pearson correlation	.145	1
	Sig.(2-tailed)	.006	
	N	361	361

Sample Mean= 2.5690, Sample Standard Deviation= 1.85387

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between the PUTME results and CGPA scores at Bayero University, Kano.

H_{O6} There is no significant relationship between Male PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the outcome of the test is presented on the table below.

Table 4.0: *Pearson Product Moment Correlation of Male PUTME results and CGPA scores at BUK*

Variable		**Male PUTME**	**Male CGPA**
Male PUTME	Pearson correlation	1	.047
	Sig.(2-tailed)		.468
	N	241	241
Male CGPA	Pearson correlation	.047	1
	Sig.(2-tailed)	.468	
	N	241	241

Sample Mean= 2.6717, Sample Standard Deviation= 1.95927

From the table above, the calculated value of PPMC is less than the level of significance.. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between Male PUTME results and CGPA scores at Bayero University, Kano.

H_{O7} There is no significant relationship between Female PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis. The outcome is presented on the table below.

Table 4.08: *Pearson Product Moment Correlation of Female PUTME results and CGPA scores at BUK*

Variable		**Female PUTME**	**Female CGPA**
Female PUTME	Pearson correlation	1	.105
	Sig.(2-tailed)		.256
	N	120	120
Female CGPA	Pearson correlation	.105	1
	Sig.(2-tailed)	.256	
	N	120	120

Sample Mean= 2.5975, Sample Standard Deviation= .79936

From the table above, the calculated value of PPMC is smaller than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between female PUTME results and CGPA scores at Bayero University, Kano.

H_{O8} There is no significant relationship between science students' PUTME resuls and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation coefficient was used to test the hypothesis. The result is presented on the table below.

Table 4.09: *Pearson Product Moment Correlation of science students' PUTME results and CGPA scores at BUK*

Variable		**Sci. PUTME**	**Sci. CGPA**
Sci. PUTME	Pearson correlation	1	.155
	Sig.(2-tailed)		.144
	N	220	220
Sci. CGPA	Pearson correlation	.155	1
	Sig.(2-tailed)	.144	
	N	220	220

Sample Mean= 2.5773, Sample Standard Deviation= ..86103

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between science PUTME results and CGPA scores at Bayero University, Kano.

H_{O9} There is no significant relationship between Art students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation coefficient was used to test the hypothesis and the result is presented on the table below

Table 4.10: *Pearson Product Moment Correlation for Arts PUTME results and CGPA scores at BUK*

Variable		**Arts PUTME**	**Arts CGPA**
Arts PUTME	Pearson correlation	1	-.059
	Sig.(2-tailed)		.487
	N	83	83
Arts CGPA	Pearson correlation	-.059	1
	Sig.(2-tailed)	.487	
	N	83	83

Sample Mean= 2.1815, Sample Standard Deviation= 1.08242

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between Art PUTME results and CGPA scores at bayero University, Kano.

H_{O10} There is no significant relationship between social science students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.11: *Pearson Product Moment Correlation of social science students' PUTME results and CGPA scores at BUK*

Variable		**S. Sci. PUTME**	**S. Sci. CGPA**
S. sci. PUTME	Pearson correlation	1	.132
	Sig.(2-tailed)		.133
	N	58	58
S. sci. CGPA	Pearson correlation	.132	1
	Sig.(2-tailed)	.133	

	N	58	58

Sample Mean= 2.3626, Sample Standard Deviation= 1.73624

From the table above, the calculated value of PPMC is smaller than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between social science PUTME results and CGPA scores at Bayero University, Kano.

H_{O11} There is no significant relationship between the combined composite scores from SSCE, UTME and PUTME and CGPA scores of undergraduates at Bayero University,Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.12: *Pearson Product Moment Correlation of CSUP results and CGPA scores at BUK*

Variable		**CSUP**	**CGPA**
CSPU	Pearson correlation	1	-.040
	Sig.(2-tailed)		.447
	N	361	361
CGPA	Pearson correlation	-.040	1
	Sig.(2-tailed)	.447	
	N	361	361

Sample Mean= 2.5523, Sample Standard Deviation= 1.82412

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between the combined composite scores from SSCE, UTME and PUTME and CGPA at Bayero University, Kano,

Table 4.13: *Summary of findings from the 2009/2010 Academic Session*

Variables correlated	**Results**
WAEC VS CGPA	No significant relationship
NECO VS CGPA	No significant relationship
SSCE VS CGPA	No significant relationship
UTME VS CGPA	No significant relationship
PUTME VS CGPA	Significantly correlated
MALE PUTME VS CGPA	No significant relationship
FEMALE PUTME VS CGPA	No significant relationship
SCIENCE PUTME VS CGPA	Significantly correlated
SOCIAL SCI. PUTME VS CGPA	No significant relationship
ART PUTME VS CGPA	No significant relationship
CSUP VS CGPA	No significant relationship
CUP VS CGPA	No significant relationship

2010/2011 academic session

The same eleven null hypotheses tested in the section above are again tested in this section.

H_{O1} There is no significant relationship between WAEC results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's product Moment Correlation was used to test the hypothesis and the result is presented on the table below.

Table 4.14: *Pearson Product Moment Correlation of WAEC results and CGPA scores at BUK*

Variable		WAEC	CGPA
WAEC	Pearson correlation	1	.081
	Sig.(2-tailed)		.207
	N	245	245
CGPA	Pearson correlation	.081	1
	Sig.(2-tailed)	.207	
	N	245	245

Sample Mean= 2.5859, Sample Standard Deviation= 1.26492

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between WAEC results and CGPA scores at Bayero University, Kano.

H_{O2} There is no significant relationship between NECO results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.15: *Pearson Product Moment Correlation of NECO results and CGPA scores at BUK*

Variable		NECO	CGPA
NECO	Pearson correlation	1	.095
	Sig.(2-tailed)		.156
	N	227	227
CGPA	Pearson correlation	.095	1
	Sig.(2-tailed)	.156	

	N	227	227

Sample Mean= 2.6157, Sample Standard Deviation= .61696

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between NECO results and CGPA scores at Bayero University, Kano.

H_{O3} There is no significant relationship between SSCE results (WAEC and NECO combined) and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.16: *Pearson's Product Moment Correlation of SSCE results and CGPA scores at BUK*

Variable		**SSCE**	**CGPA**
SSCE	Pearson correlation	1	.079
	Sig.(2-tailed)		.133
	N	361	361
CGPA	Pearson correlation	.079	1
	Sig.(2-tailed)	.133	

	N	361	361

Sample Mean= 2.1904, Sample Standard Deviation= .61485

From the table above the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between SSCE results and CGPA at Bayero University, Kano.

H_{O4} There is no significant relationship between UTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis and the result is presented on the table below.

Table 4.17: *Pearson Product Moment Correlation of UTME results and CGPA scores at BUK*

Variable		**UTME**	**CGPA**
UTME	Pearson correlation	1	.176
	Sig.(2-tailed)		.001
	N	361	361
CGPA	Pearson correlation	.176	1

	Sig.(2-tailed)	.001	
	N	361	361

Sample Mean= 2.2216, Sample Standard Deviation= 1.61722

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between UTME results and CGPA scores at Bayero University, Kano.

H_{O5} There is no significant relationship between PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis and the result is presented on the table below.

Table 4.18: *Pearson Product Moment Correlation of PUTME results and CGPA scores at BUK*

Variable		**PUTME**	**CGPA**
PUTME	Pearson correlation	1	.083
	Sig.(2-tailed)		.117
	N	361	361
CGPA	Pearson correlation	.083	1

	Sig.(2-tailed)	.117	
	N	361	361

Sample Mean= 2.7147, Sample Standard Deviation=2.13726

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between PUTME scores and CGPA scores at Bayero University, Kano.

H_{O6} There is no significant relationship between Male PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis. The outcome of the test of this hypothesis is presented on the table below.

Table 4.19: *Pearson Product Moment Correlation of Male PUTME results and CGPA scores at BUK*

Variable		**Male PUTME**	**Male CGPA**
Male PUTME	Pearson correlation	1	-.026
	Sig.(2-tailed)		.711

	N	205	205
Male CGPA	Pearson correlation	-.026	1
	Sig.(2-tailed)	.711	
	N	205	205

Sample Mean= 2.8318, Sample Standard Deviation= 2.08712

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between the Male PUTME results and CGPA scores at Bayero University, Kano.

H_{O7} There is no significant relationship between Female PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.20: *Pearson Product Moment Correlation of Female PUTME results and CGPA scores at BUK*

Variable		**Female PUTME**	**Female CGPA**
Female PUTME	Pearson correlation	1	.230
	Sig.(2-tailed)		.004

	N	156	156
Female CGPA	Pearson correlation	.230	1
	Sig.(2-tailed)	.004	
	N	156	156

Sample Mean= 2.7871, Sample Standard Deviation= 1.54818

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between Female PUTME results and CGPA scores at Bayero University, Kano.

H_{O8} There is no significant relationship between Science students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is shown on the table below.

Table 4.21: *Pearson Product Moment Correlation of Science PUTME results and CGPA scores at BUK*

Variable		**Sci. PUTME**	**Sci. CGPA**
Sci. PUTME	Pearson correlation	1	.057

	Sig.(2-tailed)		.376
	N	248	248
Sci. CGPA	Pearson correlation	.057	1
	Sig.(2-tailed)	.376	
	N	248	248

Sample Mean= 2.5907, Sample Standard Deviation= 1.93740

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis s retained and the conclusion is that there is no significant relationship between Science students' PUTME results and CGPA scores at Bayero University, Kano.

H_{O9} There is no significant relationship between Art students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the outcome is shown on the table below.

Table 4.22: *Pearson Product Moment Correlation of Art students' PUTME results and CGPA at BUK*

Variable	**Art PUTME**	**Art CGPA**

Art PUTME	Pearson correlation	1	.278
	Sig.(2-tailed)		.022
	N	68	68
Art CGPA	Pearson correlation	.278	1
	Sig.(2-tailed)	.022	
	N	68	68

Sample Mean= 2.5434, Sample Standard Deviation= 1.72001

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between the Art students' PUTME results and CGPA scores at Bayero University, Kano.

H_{O10} There is no significant relationship between Social science students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product moment correlation Coefficient was used in testing the hypothesis. The table below shows the outcome of the test.

Table 4.23: *Pearson Product Moment Correlation of Social science PUTME results and CGPA scores at BUK*

Variable		S.Sci. PUTME	S.Sci. CGPA
S.Sci. PUTME	Pearson correlation	1	-.272
	Sig.(2-tailed)		.001
	N	361	361
S.Sci. CGPA	Pearson correlation	-.272	1
	Sig.(2-tailed)	.001	
	N	361	361

Sample Mean= 2.7276, Sample Standard Deviation= 2.28498

From the table above, the calculated value of PPMC is less than the level of significance.. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between the Social science PUTME results and CGPA scores at Bayero University, Kano.

H_{O11} There is no significant relationship between the composite scores from SSCE, UTME and PUTME results and CGPA scores of undergraduates at Bayero University, Kano,

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.24: *Pearson Product Moment Correlation of CSUP results and CGPA scores at BUK*

Variable	CSPU	CGPA

CSPU	Pearson correlation	1	.093
	Sig.(2-tailed)		.077
	N	361	361
CGPA	Pearson correlation	.093	1
	Sig.(2-tailed)	.077	
	N	361	361

Sample Mean= 2.5119, Sample Standard Deviation= 1.62046

As seen on the table above, the calculated value of PPMC is greater than the level of significance..Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between the combined composite scores from SSCE, UTME and PUTME and CGPA at Bayero University, Kano.

Table 4.25: *Summary of Findings from the 2010/2011 Academic Session*

Variables correlated	Results
WAEC VS CGPA	No significant relationship
NECO VS CGPA	No significant relationship
SSCE VS CGPA	No significant relationship
UTME VS CGPA	Significantly correlated
PUTME VS CGPA	No significant relationship
MALE PUTME VS CGPA	No significant relationship
FEMALE PUTME VS CGPA	Significantly correlated
SCIENCE PUTME VS CGPA	No significant relationship
SOCIAL SCI. PUTME VS CGPA	No significant relationship
ART PUTME VS CGPA	Significantly correlated
CSUP VS CGPA	No significant relationship
CUP VS CGPA	Significantly correlated

2011/2012 academic session

In this section, the same set of hypotheses that were tested in the earlier sections were still tested. The essence is to observe and see if a particular tend will emerge in the behavior of these hypotheses across the three academic sessions.

H_{O1} There is no significant relationship between WAEC results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation was used to test the hypothesis and the result is presented on the table below

Table 4.26: *Pearson Product Moment Correlation of WAEC results and CGPA scores at BUK*

Variable		**WAEC**	**CGPA**
WAEC	Pearson correlation	1	-.019
	Sig.(2-tailed)		.754
	N	270	270
CGPA	Pearson correlation	-.019	1
	Sig.(2-tailed)	.754	
	N	270	270

Sample Mean= 2.5926, Sample Standard Deviation= 1.39080

From the table above, the calculated value of PPMC is less than the level of significance.. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between WAEC results and CGPA scores at Bayero University, Kano.

H_{O2} There is no significant relationship between NECO results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis and the result is as shown on the table below.

Table 4.27: *Pearson Product Moment Correlation of NECO results and CGPA scores at BUK*

Variable		**NECO**	**CGPA**
NECO	Pearson correlation	1	.323
	Sig.(2-tailed)		.000
	N	132	132
CGPA	Pearson correlation	.323	1
	Sig.(2-tailed)	.000	
	N	132	132

Sample Mean= 2.6301, Sample Standard Deviation=.99906

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between NECO results and CGPA scores at Bayero University, Kano.

H_{O3} There is no significant relationship between SSCE results (WAEC & NECO combined) and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis and the result is shown on the table below

Table 4.28: *Pearson Product Moment Correlation of SSCE results and CGPA scores at BUK*

Variable		**SSCE**	**CGPA**
SSCE	Pearson correlation	1	.043
	Sig.(2-tailed)		.415
	N	361	361
CGPA	Pearson correlation	.043	1
	Sig.(2-tailed)	.415	
	N	361	361

Sample Mean= 2.5543, Sample Standard Deviation= .26975

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between SSCE results and CGPA scores at Bayero University, Kano.

H_{O4} There is no significant relationship between UTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was use to test the hypothesis and the result is presented on the table below.

Table 4.29: *Pearson product moment Correlation of UTME results and CGPA scores at Bayero University, Kano*

Variable		**UTME**	**CGPA**
UTME	Pearson correlation	1	.141
	Sig.(2-tailed)		.007
	N	361	361
CGPA	Pearson correlation	.141	1
	Sig.(2-tailed)	.007	
	N	361	361

Sample Mean= 2.6038, Sample Standard Deviation= .84866

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between UTME results and CGPA scores at Bayero University, Kano.

H_{O5} There is no significant relationship between PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test this hypothesis and the result is presented on the table below.

Table 4.30: Pearson Product Moment Correlation of PUTME results and CGPA scores at Bayero University, Kano

Variable		PUTME	CGPA
PUTME	Pearson correlation	1	.167
	Sig.(2-tailed)		.001
	N	361	361
CGPA	Pearson correlation	.167	1
	Sig.(2-tailed)	.001	
	N	361	361

Sample Mean= 2.5431, Sample Standard Deviation= .87198

As seen on the table above, the value of calculated PPMC is greater than the value level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between the PUTME results and CGPA scores at Bayero University, Kano.

H_{O6} There is no significant relationship the male PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result of the test is shown on the table below.

Table 4.31: *Pearson Product Moment Correlation of male PUTME results and CGPA scores at BUK*

Variable		**Male PUTME**	**Male CGPA**
Male PUTME	Pearson correlation	1	.028
	Sig.(2-tailed)		.705
	N	217	217
Male CGPA	Pearson correlation	.028	1
	Sig.(2-tailed)	.705	
	N	217	217

Sample Mean= 2.5212, Sample Standard Deviation= 1.43321

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between male PUTME results and CGPA scores at Bayero University, Kano.

H_{O7} There is no significant relationship between female PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the outcome of the test is shown on the table below.

Table 4.32: *Pearson Product Moment Correlation of female PUTME results and CGPA scores at BUK*

Variable		**Female PUTME**	**Female CGPA**
Female PUTME	Pearson correlation	1	.341
	Sig.(2-tailed)		.000
	N	144	144
Female CGPA	Pearson correlation	.341	1
	Sig.(2-tailed)	.000	
	N	144	144

Sample Mean= 2.7315, Sample Standard Deviation= 1.52263

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between female PUTME results and CGPA scores at Bayero University, Kano.

H_{O8} There is no significant relationship between science students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result of the test is shown on the table below.

Table 4.33: *Pearson Product Moment Correlation of science PUTME results and CGPA scores at BUK*

Variable		**Sci. PUTME**	**Sci. CGPA**
Sci. PUTME	Pearson correlation	1	.102
	Sig.(2-tailed)		.128
	N	223	223
Sci. CGPA	Pearson correlation	.102	1
	Sig.(2-tailed)	.128	
	N	223	223

Sample Mean= 2.6462, Sample Standard Deviation= 1.63002

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between Science PUTME results and CGPA scores at Bayero University, Kano.

H_{O9} There is no significant relationship between Art students' PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.34: *Pearson Product Moment Correlation of Art PUTME results and CGPA scores at BUK*

Variable		**Art PUTME**	**Art CGPA**
Art PUTME	Pearson correlation	1	.088
	Sig.(2-tailed)		.464
	N	72	72
Art CGPA	Pearson correlation	.088	1
	Sig.(2-tailed)	.464	
	N	72	72

Sample Mean= 2.51523, Sample Standard Deviation= 1.82423

From the table above, the calculated value of PPMC is less than the level of significance. Therefore, the null hypothesis is retained and the conclusion is that there is no significant relationship between Art PUTME results and CGPA scores at Bayero University, Kano.

H_{O10} There is no significant relationship between Social Science PUTME results and CGPA scores at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is provided on the table below.

Table 4.35: *Pearson Product Moment Correlation of Social science PUTME results and CGPA scores at BUK*

Variable		**S.sc. PUTME**	**S.sc. CGPA**
S.sc PUTME	Pearson correlation	1	.221
	Sig.(2-tailed)		.075
	N	66	66
S.sc. CGPA	Pearson correlation	.221	1
	Sig.(2-tailed)	.075	
	N	66	66

Sample Mean= 2.5521, Sample Standard Deviation= 1.56517

From the table above, the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between Social science PUTME results and CGPA scores at Bayero University, Kano.

H_{O11} There is no significant relationship between the combined composite score from SSCE, UTME and PUTME results and CGPA scores of undergraduates at Bayero University, Kano.

The Pearson's Product Moment Correlation Coefficient was used to test the hypothesis and the result is presented on the table below.

Table 4.36: *Pearson Product Moment Correlation of CSUP results and CGPA scores at BUK*

Variable		**CSPU**	**CGPA**
CSPU	Pearson correlation	1	.157
	Sig.(2-tailed)		.004
	N	361	361
CGPA	Pearson correlation	.157	1
	Sig.(2-tailed)	.004	
	N	361	361

Sample Mean= 2.6167, Sample Standard Deviation= 1.82324

From the table above the calculated value of PPMC is greater than the level of significance. Therefore, the null hypothesis is rejected and the conclusion is that there is a significant relationship between the combined composite scores from SSCE, UTME and PUTME and CGPA at Bayero University, Kano.

Table 4.37: *Summary of Findings from the 2011/2012 Academic Session*

Variables correlated			Results
WAEC	VS	CGPA	No significant relationship
NECO	VS	CGPA	Significantly correlated
SSCE	VS	CGPA	No significant relationship
UTME	VS	CGPA	Significantly correlated
PUTME	VS	CGPA	Significantly correlated
MALE PUTME	VS	CGPA	No significant relationship
FEMALE PUTME	VS	CGPA	Significantly correlated
SCIENCE PUTME	VS	CGPA	No significant relationship
SOCIAL SCI. PUTME	VS	CGPA	No significant relationship
ART PUTME	VS	CGPA	Significantly correlated
CSUP	VS	CGPA	Significantly correlated
CUP	VS	CGPA	Significantly correlated

Having observed the relationship between the UTME scores and CGPA on one hand and that between the PUTME and CGPA on the other hand, the researcher decided to combine the UTME and PUTME scores and correlate it with CGPA in each of the three academic sessions covered by the research. The result of the exercise is shown on the tables below.

Table 4.38: *Pearson Product Moment Correlation of combined UTME /PUTME results and CGPA scores at BUK for the 2009/2010 academic session*

Variable		**UTME/PUTME**	**CGPA**
UTME/PUTME	Pearson correlation	1	.132
	Sig.(2-tailed)		.145
	N	361	361
CGPA	Pearson correlation	.132	1
	Sig.(2-tailed)	.145	
	N	361	361

There is no significant relationship between the combined UTME/PUTME results and CGPA scores for the 2009/2010 academic session at Bayero University, Kano as the calculated value of PPMC is less than the level of significance. .

Table 4.39: *Pearson Product Moment Correlation of combined UTME/PUTME results and CGPA scores for the 2010/2011 academic session*

Variable		UTME/PUTME	CGPA
UTME/PUTME	Pearson correlation	1	.130
	Sig.(2-tailed)		.059
	N	361	361
CGPA	Pearson correlation	.130	1
	Sig.(2-tailed)	.059	
	N	361	361

There is a significant relationship between the combined UTME/PTME results and CGPA scores for the 2010/2011 academic session at Bayero Uniersity, Kano as the calculated value of PPMC is greater than the level of significance..

Table 4.40: *Pearson Product Moment Correlation of combined UTME/PUTME and CGPA for the 2011/2012 academic session*

Variable		UTME/PUTME	CGPA
UTME/PUTME	Pearson correlation	1	.154
	Sig.(2-tailed)		.004
	N	361	361
CGPA	Pearson correlation	.154	1
	Sig.(2-tailed)	.004	
	N	361	361

There is a significant relationship between the combined UTME/PUTME results and CGPA scores for the 2011/2012 academic session at Bayero University, Kano as the calculated value of PPMC is greater than the level of significance.

The independent t-test for the difference among the various examinations on gender basis was conducted and the result is presented in the table below.

Table 4.41: *Independent t-test for difference in performance on gender basis among varying examinations.*

EXAM	SEX	N	t	p
WAEC	MALE	389		
	FEMALE	313	-.378	.706
NECO	MALE	343		
	FEMALE	167	-.312	.755
UTME	MALE	658		
	FEMALE	425	.365	.715
PUTME	MALE	688		
	FEMALE	425	.394	.694

The results show that there is no significant difference in performance in the various examinations on gender basis, WAEC (t=-.378, p=.705); NECO (t=-.312, p= .755) etc.

In this section, the result of each of the entry examination for the three years put together was correlated with the corresponding CGPA and the outcome is presented in the table below:

Table 4.42: *Correlation of entry results and CGPA for the three academic sessions put together.*

EXAM		CGPA	
WEAC	Pearson correlation Sign (2-tailed) N	.033 .386 704	No significant relationship
NECO	Pearson correlation Sign (2-tailed) N	.096 .031 511	Significantly correlated
SSCE	Pearson correlation Sign (2-tailed) N	.007 .814 1083	No significant relationship
SSCE	Pearson correlation Sign (2-tailed) N	.007 .814 1083	No significant relationship
UTME	Pearson correlation Sign (2-tailed) N	.429 .359 1083	Significantly correlated
PUTME	Pearson correlation Sign (2-tailed) N	.024 .651 1083	No significant relationship

From the results in the table above, only the NECO and UTME results were significantly correlated with CGPA for the three academic sessions put together, the rest were not.

4.4 Summary of findings

For most of the hypotheses tested across the three academic sessions at Bayero University, Kano, the null hypotheses were confirmed. This means there was no significant relationship between the entry requirements and University performance (CGPA). The exceptions were in the areas of UTME and PUTME. The summary of findings is presented below.

- There is no significant relationship between WAEC results and CGPA scores (Table 4.02, 4.14, 4.26). WAEC was not significantly correlated with CGPA in any of the three academic sessions under study.
- There is significant relationship between NECO results and CGPA scores in the 2011/2012 academic session only (Table 4.26).
- SSCE result is a poor predictor of academic performance (Table 4.04, 4.16, 4.28). The SSCE was not significantly correlated with CGPA in any of the academic sessions under review.
- UTME result is significant in predicting academic performance (Table 4.17, 4.29). The UTME was significantly correlated with CGPA in two out of the three academic sessions under review.
- PUTME result is significant in predicting academic performance in two of the three academic sessions under review (Table 4.06, 4.30).
- A combination of SSCE, UTME and PUTME results was significant in predicting students' academic performance in two out of the three academic sessions under review (Table 4.24, 4.36).

- The combined UTME and PUTME results was significant in predicting academic performance in two out of the three academic sessions considered in the research (Table 4.39, 4.40).
- There was higher correlation between female entry results and CGPA scores than the males. The female entry results were significantly correlated with CGPA in two out of the three academic sessions (Table 4.20, 4.32) as against none by the males.
- Science, Social Science, and Art entry results were significantly correlated with CGPA once each in the three academic sessions considered. This can be described as poor.
- There is no significant difference in performance in the examinations under review on the basis of gender differences.
- For the three academic sessions put together, only the NECO and UTME results are significantly correlated with CGPA.

4.5 Discussions

Data analysis results above show that SSCE (WAEC & NECO) are poor predictors of further academic performance. This is in agreement with some previous researches on the same area such as Sumaila, (2005) and Umar, (2006). WAEC and NECO examinations have been plagued by high level of examination malpractices for more than a decade now. Afemikhe, (2005) wrote that 'miracle centers' exist for most of the public examinations conducted in the country. It is unfortunate to note that nowadays, secondary school students believe that the only means to success in the SSCE is through examination malpractices. Public Examination Bodies such as WAEC, JAMB, etc, have devised various measures to curb the menace of examination malpractice both in the past and at present. However, the outcome of this research shows that in the case of WAEC and NECO, these efforts have not yielded the desired results.

Apart from the problem of examination malpractices, SSCE candidates have resorted to vigorous practice and revision of past examination questions and answers which are available in booklet form in bookshops. WAEC and NECO normally repeat past questions and these candidates have the advantage of scoring high grades in the examinations. They read just for the grades but not for the knowledge.

In addition to the above problems, SSCE candidates are mostly teenagers who are capable of memorizing large amount of material but without the actual knowledge or understanding of such material. Such candidates pass the SSCE with good grades and are qualified to seek for further studies but without the background knowledge necessary for success in such further studies.

All the above problems combined may just be responsible for the consistent disparity between SSCE results and CGPA scores recorded in previous researches as well as this particular esearch.

The research findings above also indicate higher correlation coefficient between NECO results and CGPA than WAEC results and CGPA. This is contrary to the research findings by Sumaila, (2005) which showed that WAEC SSCE results were better in predicting academic performance than NECO's SSCE results. The outcome of this research may be due to the fact that many candidates who register for NECO examination do so in case they do not pass any of the subjects in the WAEC examination. The emphasis is on WAEC not NECO. Some that register only for NECO feel that the examination is easier to pass and therefore, no need for any dubious means towards passing the examination. This does not mean that there are no malpractices in the conduct of the NECO examination, but such cases are minimal.

The research findings above also indicate that both the UTME and PUTME are significant in predicting University academic performance. This is contrary to the findings by Ifedili and

Ifedili, (2010) which indicated that the two entry requirements were poor predictors or University academic performance. Ifedili and Ifedili, (2010) took the sample for the UTME and PUTME analysis from the 2004/2005 and 2005/2006 academic sessions respectively. The difference between this research outcome and that of Ifedili and Ifedili, (2010) on UTME results and University performance may be the fact that JAMB has succeeded in blocking all the avenues for examination malpractices in the conduct of its examinations. Recall from literature review that JAMB had put several measures in place to check examination malpractices in the conduct of the UTME. With the introduction of the computer based test, it is expected that UTME results will be more valid than they are currently.

In the case of PUTME, the sample used by Ifedili and Ifedili, (2010) was the first set of candidates to sit for the PUTME. Being the first of its kind and not being a standardized test where the psycmometric properties are properly checked, the PUTME may have started with some technical deficiencies such as inappropriate difficulty level of test items and poor discrimination, among others. These may have been improved upon in the subsequent versions of the examination. In comparism of the two, UTME and PUTME are equal in predicting academic performance. This is contrary to Ifedili and Ifedili, (2010) who found PUTME to be better in predicting academic performance than UTME.

The combination of WAEC and NECO to form what we call SSCE, was poor in predicting University academic performance probably because the WAEC and CGPA correlation were negative in two of the three academic sessions under review (Table 4.04 & 4.28). This lowered the correlation coefficient of the combined scores and CGPA. The combined scores from SSCE, UTME and PUTME were significantly correlated with the CGPA because NECO results were significantly correlated with CGPA scores in 2011/2012 academic session while both UTME

and PUTME were significantly correlated with CGPA in two of the three academic sessions This would have pushed up the combined scores. The combined scores from UTME and PUTME were significantly correlated with CGPA scores in two of the three academic sessions under review Previous researches did not attempt the combination of different test results as done in this research.

Furthermore, the combination between female entry requirements and CGPA were higher than those of the males. This could be explained in the fact that the tendency to be truthful and original in the conduct of various affairs is higher among the females than the males. This translates to the possibility that most of the entry requirements presented by the female candidates for University admission were obtained through legitimate means. The males on the other hand are more ambitious and most likely to explore any means available towards achieving their objectives including dubious means.

The Science, Social Science and Arts entry requirements were each significantly correlated with CGPA only once out of the three academic sessions reviewed in this research. This shows that there is no significant variation in the prediction of academic performance on the basis of course of study.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, the conclusions made based on research findings, recommendations based on the research outcome as well as recommendations for further studies.

5.2 Summary

The research was an investigation of the academic requirements for admission as predictors of academic performance at Bayero University, Kano. The research covered three academic sessions- 2009/2010, 2010/2011 and 2011/1012 and was broken down into five chapters.

Chapter one gave a general background to the study. Beginning with the broad relevance of test results right from time immemorial, both within and outside the field of Education, the discussion was narrowed down to the use of test results for educational decision making in Nigeria as well as problems facing the conduct of valid public examinations in Nigeria. Five research objectives were stated and eleven null hypotheses were drawn from the objectives for testing. The chapter was rounded up with a statement of the significance of study and the area of coverage.

Chapter two covered a review of literature related to the study. Here, the concept, types, classification, qualities and uses of tests were fully discussed. Relevant concepts such as the concept of academic performance and the concept of predictive validity were discussed. The chapter was concluded with review of empirical studies on the variables considered in the research. These are the SSCE, UTME, PUTME and CGPA.

Chapter three covered the research methodology. Here, the research design (Ex- Post Facto) was stated as well as population and sample. The population was 100- level students of Bayero

University, Kano for the 2009/2010, 2010/2011 and 2011/2012 academic sessions. A sample of 1083 was selected from a total population of 18,421, 361 samples from each academic session according to the table for sample selection. Data collection instruments and their validation, data collection and data analysis procedure were covered in this chapter.

Chapter four presented analysis of data collected. Each of the eleven hypotheses was stated alongside the table showing the correlation matrix for the hypothesis This was repeated for each of the three academic sessions. A summary of research findings was made. The findings showed that WAEC and NECO results are poor in predicting academic performance while UTME and PUTME are significant in predicting academic performance. The chapter was concluded with a discussion of research findings.

Chapter five is a summary of the study, conclusions made based on the research outcome as well as recommendations.

5.3 Conclusions

The research findings above show that the SSCE (WAEC & NECO) results are poor predictors of academic achievement (Tables 4.02, 4.03, etc.). This means educational decisions made on the basis of SSCE results in Nigeria over the years have been erroneous. Candidates have been selected on the basis of their SSCE results to read various courses in institutions of higher learning which the candidates really never qualified for. This situation led to confusion among decision makers in institutions of higher learning as to why candidate who were selected for the various courses on merit could not cope with academics in their respective courses.

The skepticism that members of the public, organizations and institutions of higher learning express in high grades obtained by SSCE candidates should be a matter of concern for all as the

SSCE has consistently failed to predict academic performance as revealed by various researches including this very one.

The WAEC and NECO have not done enough to tackle the problem of examination malpractices. Candidates continue to resort to dubious means towards passing the SSEC because there are avenues for doing so which have not been blocked by the examination bodies.

The outcome of this research will certainly restore the confidence of the public and institutions of higher learning in the UTME results. JAMB had, in the past, put in place measures to check examination malpractices. The outcome of this research is an indication that the measures have yielded the expected results.

When University authorities in Nigeria introduced the PUTME test in 2006, many saw it as an unnecessary and additional burden on candidates intending to study in Nigerian Universities. However, the outcome of this research has vindicated the University authorities of their actions. For now, the UTME and PUTME are just adequate for determining the suitability or otherwise of candidates intending to read various courses in Nigerian Universities.

Of all the academic requirements for admission considered in this research, the UTME and PUTME results best predict students' academic performance. In other words, the selection examinations are better predictors of academic performance than the certification examinations.

5.4 Recommendations

The period before 1978 in Nigerian educational system was characterized by University candidates having to pass the WAEC and an entrance examination conducted by the University

of the Candidate's Choice. From 1978 to 1999, a candidate was expected to pass the WAEC and the University Matriculation Examination (UME) to gain admission into the University of his/her choice. From 2000 to 2005, there was an option of WAEC or NECO result in addition to UME for University admission. From 2006 to date, a candidate for a University programme has to pass the SSCE, UTME and PUTME to get admission. A number of researches in the past revealed that SSCE, UTME and PUTME were poor predictors of academic achievement. However, this research brought about different outcome on some of these entry requirements giving rise to the recommendations below.

5.4.1 Recommendations from the study

The WAEC and NECO need to do more to ensure that the conduct of these examinations is free of malpractices or at least reduce it to the barest minimum. These examination bodies may wish to consult JAMB on how it was able to achieve progress in the struggle against cases of irregularities in the conduct of its examinations. Or more importantly, WAEC and NECO may wish to vigorously seek for and identify the leakages and those involved with the view to permanently blocking them.

Educational and other policy makers should deemphasize the relevance of paper qualification which is believed to have made people desperate to acquire such paper qualifications for various purposes. Out of this desperation, many resort to unwholesome means for acquiring such certificates including examination malpractices. We have to understand that the regular system of education we have in the country is not meant for all because of differences in biological and environmental factors surrounding individuals. However, the emphasis on certificates has pushed some people into the educational system that would have been useful elsewhere. They are not

supposed to be part of the system but now they have to find a way through and acquire the much needed certificate.

Anastasi and Urbina, (2010) wrote in favour of combination of test results for educational decision making. From the outcome of this research, the researcher would recommend that the combined UTME and PUTME results is the best combination for sound educational decisions especially regarding transition from secondary to tertiary levels.

At Present, the PUTME test is University based. This implies the possibility of some differences in the nature of the examination across different Universities such as difficulty level of test items, time limits etc, even though the examination serves the same purpose. The researcher would therefore recommend that the University authorities should see to the harmonization of the nature and conduct of the examination so that all candidates, irrespective of University of choice, are examined uniformly.

If a single test result is to be considered for admission into Universities, the best option available as indicated by the outcome of this research is the UTME or PUTME results.

5.4.2 Recommendations for further studies

As a result of time limits set for this programme as well as financial constraints at the moment, the research was restricted to Bayero University, Kano. However, the Federal Ministry of Education through the National Universities' Commission (NUC) can arrange for an expanded version of the research covering a number of Universities in each of the six geopolitical zones of the country for the sake of generalization of results.

The WAEC and NECO have failed to conduct examinations with valid results capable of predicting performance at University level as indicated by the outcome of this and some previous

researches. However, there are other important qualities of these test that have not received adequate attention of researchers such as reliability of results, discrimination of test items, etc, which can be the focus of other researches. Another area that WAEC and NECO deserve a separate research is the comparability of grading standards of the two examination bodies. This is because candidates who sit for both WAEC and NECO examinations do not score similar grades in the respective subjects. The research should focus on whether, for example, a C5 in Mathematics in WAEC is equivalent to a C5 in Mathematics in NECO.

In addition, a special research should be carried out to unveil all the possible reasons and causes of consistent absence of significant correlation between the WAEC and NECO results and CGPA scores as indicated by many previous researches including this one.

Finally, an investigation can be carried out on the PUTME across the federation to determine the degree of uniformity/similarity or otherwise of the examination among the various Universities with the view to making amendments if and where necessary.

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APPENDICES

Appendix One: Letter of introduction from Education Department.

Appendix Two: Letter of request for research data.

Appendix Three: Proforma for Data collection.

Appendix Four: Raw Data, 2009/2010 Academic Session.

S/no	Code	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA

	no									
1	1	F	2.7	3.0	2.9	2.5	2.0	2.5	2.3	3.2
2	1	F		2.4	2.4	2.5	2.4	2.4	2.5	2.3
3	1	F		1.8	1.8	2.4	2.2	2.1	2.3	1.1
4	1	F	1.8		1.8	3.0	2.5	2.4	2.8	1.3
5	1	F	3.3		3.3	2.4	2.6	2.8	2.5	2.9
6	1	F	1.7	2.0	1.9	2.6	2.2	2.2	2.4	1.8
7	1	F	1.9	0.7	1.3	2.3	3.0	2.2	2.7	3.4
8	1	F	2.8	2.6	2.7	3.0	2.8	2.8	2.9	2.7
9	1	F	3.1		3.1	2.5	2.2	2.6	2.4	3.7
10	1	F		2.3	2.3	2.4	2.1	2.3	2.3	2.9
11	1	F		2.6	2.6	2.3	2.2	2.4	2.3	1.6
12	1	F	3.2		3.2	3.2	2.2	2.9	2.7	1.2
13	1	M	2.1	2.0	2.1	2.8	3.2	2.7	3.0	4.4
14	1	M	2.4	3.4	2.9	2.4	2.4	2.6	2.4	1.6
15	1	F	3.1		3.1	2.3	2.6	2.7	2.5	2.3
16	1	F	3.0	2.0	2.5	2.6	2.1	2.4	2.4	3.6
17	1	F		1.8	1.8	2.3	2.3	2.1	2.3	1.4
18	1	F		2.8	2.8	2.6	2.0	2.5	2.3	3.3
19	1	M	3.4		3.4	2.6	2.9	3.0	2.8	3.4
20	1	M	2.4	2.2	2.3	2.3	2.5	2.4	2.4	2.2
21	1	M	2.7		2.7	2.5	2.7	2.6	2.6	1.8
22	1	M	2.7	2.4	2.6	2.4	2.8	2.6	2.6	2.5
23	1	M	3.1	2.4	2.8	2.9	2.8	2.8	2.8	3.4
24	1	M	2.2	1.8	2.0	2.3	2.4	2.2	2.4	2.8
25	1	M	1.9	2.4	2.2	2.3	2.5	2.3	2.4	2.5
26	1	M		2.4	2.4	2.9	2.3	2.5	2.6	2.5
27	1	F	1.9	2.9	2.4	2.8	2.8	2.7	2.8	3.6
28	1	F	2.6	2.5	2.6	2.6	2.1	2.4	2.4	2.2
29	1	F	1.9	1.7	1.8	3.0	2.4	2.4	2.7	2.6
30	1	M		2.8	2.8	2.4	2.9	2.7	2.7	3.4
31	1	F	3.3		3.3	2.5	2.3	2.7	2.4	3.4
32	1	F	1.8	2.0	1.9	2.7	2.4	2.3	2.6	2.9
33	1	M	1.9	1.5	1.7	2.3	2.5	2.2	2.4	2.5
34	1	M	2.9		2.3	2.5	2.9	2.8	2.7	2.7
35	1	F	3.9		3.9	2.3	2.5	2.9	2.4	2.2
36	1	F	3.1		3.1	2.6	2.2	2.6	2.4	2.3
37	1	F	2.8		2.8	2.4	2,0	2.4	2.2	2.7
38	1	F	3.1	1.9	2.5	2.5	3.0	2.7	2.8	2.7
39	1	F	3.6	2.5	3.1	2.6	2.6	2.8	2.6	3.4
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
40	1	F	1.6	2.2	1.9	2.3	2.5	2.2	2.4	3.8
41	1	M	1.7	3.1	2.4	3.1	2.6	2.7	2.9	1.4
42	1	M	1.4	2.4	1.9	2.3	2.8	3.2	2.6	2.9

43	1	F	2.6	2.4	2.5	2.3	2.7	2.5	2.5	2.3
44	1	M	2.2	2.2	2.2	2.4	2.7	2.4	2.6	4.0
45	1	M		2.6	2.6	2.4	2.5	2.5	2.5	2.9
46	1	M	4.7		4.7	2.3	2.7	3.2	2.5	2.4
47	1	M	2.3	1.6	2.0	2.5	2.0	2.2	2.3	2.0
48	1	F	2.4		2.4	3.0	2.2	2.5	2.6	1.3
49	1	F	3.2		3.2	2.5	2.8	2.8	2.8	3.3
50	1	M	2.6	2.7	2.7	2.5	2.2	2.5	2.4	2.3
51	1	M	2.7		2.7	2.3	2.0	2.3	2.2	2.1
52	1	F	2.2		2.2	2.4	2.4	2.3	2.4	2.1
53	1	F	3.3	3.2	3.3	2.5	2.5	2.8	2.5	4.3
54	1	M	2.2	2.5	2.4	2.5	2.3	2.4	2.4	1.9
55	1	M	2.3		2.3	2.5	2.6	2.5	2.6	2.8
56	1	M	2.6	2.8	2.7	3.0	2.6	2.8	2.8	1.4
57	1	F	2.0		2,0	2.4	2.6	2.3	3.0	1.7
58	1	M	3.5		3.5	2.5	2.0	2.7	2.3	1.9
59	1	M	3.1	2.6	2.9	2.7	2.0	2,5	2.4	4.3
60	1	M		2.5	2.5	2.4	2.0	2.3	2.2	0.8
61	1	M		3.1	3.1	2.5	2.2	2.6	2.4	2.1
62	1	M	2.4		2.4	2.4	2.1	2.3	2.3	2.4
63	1	M	2.6		2.6	2.8	2.2	2.5	2.5	3.1
64	1	M		2.5	2.5	2.6	2.2	2.4	2.4	3.7
65	1	M		2.3	2.3	2.3	2.0	2.2	2.2	3.4
66	1	M	2.4		2.4	2.5	2.2	2.4	2.4	2.7
67	1	M	2.6	2.4	2.5	2.4	2.3	2.4	2.4	1.9
68	1	M		2.2	2.2	2.5	2.5	2.4	2.5	3.1
69	1	M	2.0		2.0	2,6	2.4	2.3	2.5	2.9
70	1	M		2.3	2.3	2.4	2.2	2.3	2.3	1.9
71	1	F	2.8	2.5	2.7	2.6	2.1	2.5	2.4	3.7
72	1	M		2.4	2.4	2.5	2.4	2.4	2.5	1.1
73	1	M	3.3		3.3	2.6	2.3	2.7	2.5	1.2
74	1	M	3.0		3.0	2.4	2.0	2.5	2.2	3..2
75	1	M	3.8		3.8	2.8	2.1	2.9	2.5	2.6
76	1	M	2.3		2.3	3.1	2.3	2.6	2.7	3.2
77	1	F	3.0		3.0	2.6	2.1	2.6	2.4	2.1
78	1	M		2.5	2.5	2.4	2.3	2.4	2.4	4.1
79	1	F		2.6	2.6	2.4	2.5	1.5	2.4	1.8

S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
80	1	M	3.1		3.1	2.4	2.4	2.6	2.4	3.6
81	1	M	2.0	1.8	1.9	2.4	2.0	2.1	2.2	1.7
82	1	M	3.1		3.1	3.2	2.1	2.8	2.7	2.4

83	1	M		2.3	2.3	2.8	2.0	2.4	2.4	1.2
84	1	F	2.0	2.2	2.1	2.3	2.3	2.2	2.3	2.2
85	1	M		2.4	2.4	2.3	2.2	2.3	2.3	2.8
86	1	M	1.9		1.9	2.4	2.2	2.2	2.3	3.3
87	1	F		2.5	2.5	3.1	2.4	2.7	2.8	4.0
88	1	F	3.2		3.2	3.1	2.3	2.9	2.7	2.4
89	1	M		1.3	1.3	2.4	2.0	1.9	2.2	2.6
90	1	M	3.0		3.0	2.5	2.0	2.5	2.3	2.1
91	1	M	2.4	1..6	2.0	2.6	2.4	2.3	3.0	3.6
92	1	M	1.3	1.5	1.4	2.7	2.0	2.0	2.4	3.2
93	1	M	2.7		2.7	3.0	2.2	2.6	2.6	2.9
94	1	F	3.1		3.1	2.7	2.2	2.7	2.4	3.0
95	1	M	2.1	2.9	2.5	2.5	2.0	2.3	2.3	4.5
96	1	M	1.5		1.5	2.3	2.1	2.0	2.2	3.1
97	1	M	3.8	3.1	3.5	2.3	2.0	2.6	2.2	5.0
98	1	F		3.2	3.2	2.9	2.1	2.7	2.5	3.1
99	1	M	3.3		3.3	2.3	2.3	2.6	2.3	2.6
100	1	M	3.4		3.4	2.6	2.2	2.7	2.4	4.2
101	1	F	2..6		2.6	3.1	2.4	2.7	2.8	2.3
102	1	M		2.5	2.5	2.4	2.8	2.6	2.7	2.3
103	1	M	2.8		2.8	2.3	2.3	2..5	2.3	2.8
104	1	M	2.8		2.8	2.7	2.2	2.6	3.0	2.7
105	1	F	2.3	1.6	2.0	2.4	2.0	2.1	2.2	2.8
106	1	M	3.4		3.4	2.7	2.1	2.7	2.4	2.9
107	1	F		2.3	2.3	3.0	2.2	2.5	2.6	2.2
108	1	M	2.1	3.5	2.8	2.7	2.1	2.5	2.4	4.0
109	1	M	2.5	2.0	2.3	2.5	4.2	3.0	2.4	3.8
110	1	M	2.9	2.9	2.9	3.1	2.6	2.9	2.9	2.3
111	1	F	2.1	3.1	2.6	2.5	2.2	2.4	2.4	2.4
112	1	F	2.4		2.4	2.6	2.6	2.5	2.6	2.7
113	1	F	3.4		3.4	2.4	2.2	2.7	2.3	1.7
114	1	F	3.8		3.8	2..5	2.1	2.8	2.3	2.0
115	1	F	2.3	2.3	2.3	2.6	2.8	2.6	2.7	3.7
116	1	M	3.3		3.3	2.3	2.2	2.6	2.3	3.1
117	1	M	3.1		3.1	2.3	2.0	2.5	2.2	3.4
118	1	F	3.0	2.4	2.7	2.3	2.0	2.3	2.2	2.9
119	1	F	2.2	2.1	2.2	2.4	2.0	2.2	2.2	2.1
120	1	F	2.2	2.1	2.2	2.3	2.3	2.3	2.3	1.7
121	1	M	3.4		3.4	2.5	2.0	2.6	2.3	1.8
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
122	1	M	3.3	2.5	3.0	2.5	2.1	2.5	2.3	2..4
123	1	F	3.0		3.0	2.4	2.0	2.5	2.2	2.8
124	1	F	3.5	2.6	3.1	2.6	2.0	2.6	2.3	3.4
125	1	M	2.6		2.6	2.7	2.0	2.4	2.4	2.7

126	1	M		2.0	2.0	2.9	2.9	2.6	2.9	2.8
127	1	M		2.6	2.6	2.4	2.6	2.5	2.5	2.6
128	1	F	3.5	2.3	2.9	2.5	2.4	2.6	2.5	1.9
129	1	F		2.2	2.2	2.4	2.1	2.2	2.3	2.4
130	1	F	2.7	1.7	2.2	2.4	2.0	2.2	2.2	2.7
131	1	F	2.3		2.3	2.6	2.1	2.3	2.4	2.2
132	1	M		2.3	2.3	2.4	2.0	2.2	2.2	2.7
133	1	M		2.0	2.0	2.7	2.4	2.4	2.6	2.9
134	1	M	2.0	2.3	2.2	2.4	2.1	2.2	2.3	2.2
135	1	M		2.6	2.6	2.5	2.3	2.5	2.4	2.0
136	1	F	2.9	2.2	2.6	3.0	3.2	2.9	3.1	3.8
137	1	F	2.3		2.3	2.4	2.5	2.4	2.5	1.8
138	1	F	3.1		3.1	2.5	2.6	2.7	1.8	2.6
139	1	F	3.5		3.5	2.7	2.0	2.7	2.4	2.2
140	1	F	2.7	1.6	2.2	2.8	2.1	2.4	2.5	2.0
141	1	M	2.3	2.6	2.5	2.6	2.1	2.4	2.4	2.5
142	1	M	2.6	2.2	2.4	2.6	2.9	2.6	2.8	2.9
143	1	M		1.9	1.9	2.3	2.8	2.3	2.6	2.7
144	1	M	2.4	2.0	2.2	2.4	2..3	2.3	2.4	2.2
145	1	F		3.0	3.0	2.3	2.4	2.6	2.4	1.2
146	1	F	3.0		3.0	2.5	2.0	2.5	2.3	3.8
147	1	F	2.9		2.9	2.4	2.2	2.5	2.3	2.7
148	1	F	2.9	2.0	2.5	2.6	2.0	2.4	2.3	1.9
149	1	F	2.6	1.9	2.3	2.4	2.2	2.3	2.3	1.9
150	1	F	3.8	2.3	3.1	2.9	2.1	2.4	2.5	3.4
151	1	M		2.7	2.7	2.7	2.0	2.5	2.4	3.4
152	1	M	3.0		3.0	2.7	2.2	2.6	2.5	3.9
153	1	M	3.8		3.8	2.5	2.3	2.9	2.4	2.9
154	1	M	2.1	3.8	3.0	2.8	2.3	2.7	12.6	1.5
155	1	F	2.8		2.8	2.5	2.3	2.5	2.4	4.2
156	1	F	2.4		2.4	2.6	2.4	2.5	2.5	3.7
157	1	F		2.9	2.9	2.6	2.0	2.5	2.3	4.4
158	1	F	3.3	3.2	3.3	2.7	2.6	2.9	2.7	4.7
159	1	F	3.3		3.3	2.7	2.1	2.7	2.4	3.9
160	1	F	2.6		2.6	2.6	2.2	2.5	2.4	3.3
161	1	F	4.0		4.0	2.8	2.3	3.0	2.6	3.5
162	1	M		2.5	2.5	3.2	2.2	2.6	2.7	2.5
163	1	M	2.4		2.4	2.7	2.2	2.4	2.5	3.0
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
164	1	F	2.8		2.8	3.1	2.4	2.8	2.3	3.4
165	1	M		4.0	4.0	2.5	2.1	2.9	2.3	4.2
166	1	F	3.4	2.2	2.8	2.5	2.1	2.5	2.3	2.9
167	1	M	2.4		2.4	2.3	2.0	2.2	2.2	3.4
168	1	M	2.8		2.8	2.5	2.1	2.5	2.3	4.4

169	1	M		3.1	3.1	2.6	2.5	2.7	2.6	2.7
170	1	M	3.8		3.8	2.4	2.0	2.7	2.2	3.8
171	1	M		2.8	2.8	2.7	2.1	2.5	2.4	4.0
172	1	M		2.6	2.6	2.5	2.0	2.4	2.3	2.8
173	1	F	3.0		3.0	2.7	2.2	2.6	2.5	3.5
174	1	F	3.5		3.5	2.8	2.1	2.8	2.5	4.0
175	1	M	1.9	2.6	2.3	2.8	2.0	2.4	2.4	2.8
176	1	F		2.3	2.3	3.0	2.2	2.5	2.6	3.5
177	1	F		1.9	1.9	2.4	2.0	2.1	2.2	3.4
178	1	M	4.2	2.8	3.5	2..9	2.1	2.8	2.5	3.5
179	1	M	3.8	3.1	3.5	2.7	2.0	2.7	2.4	3.5
180	1	F		2.6	2..6	2.4	2.1	2.4	2.3	2.2
181	1	M	2.7	2.2	2.5	2.4	2.0	2.3	2.2	2.9
182	1	M	3.6		3.6	2.7	2.0	2.8	2.4	4.6
183	1	M	2.6	2.4	2.5	2.8	2.1	2.5	2.5	3.5
184	1	F		1.6	1.6	3.1	2.0	2.2	2.6	2.6
185	1	M	2.2	2.5	2.4	2.7	2.5	2.6	2.7	3.1
186	1	M	3.2		3.2	2.9	2.2	2.8	2.6	4.2
187	1	M		3.1	3.1	2.7	2.2	2.7	2.4	3.4
188	1	M	2.1	2.0	2.1	2.8	3.2	2.7	3.0	4.4
189	1	M	2.4	3.4	2.9	2.4	2.4	2.6	2.4	1.6
190	1	M	2.7		2.7	2.5	2.7	2.6	2.6	1.8
191	1	M	2.7	2.4	2.6	2.4	2.8	2.6	2.6	2.5
192	1	M	1.9	2.4	2.2	2.3	2.5	2.3	2.4	2.5
193	1	F	1.8		1.8	3.0	2.5	2.4	2.8	1.3
194	1	F	3.3		3.3	2.4	2.6	2.8	2.5	2.9
195	1	M	1.7	3.1	2.4	3.1	2.6	2.7	2.9	1.4
196	1	M	1.4	2.4	1.9	2.3	2.8	2.3	2.6	2.9
197	1	M	2.2	2.2	2.2	2.4	2.7	2.4	2.6	4.0
198	1	M	4.7		4.7	2.3	2.7	3.2	2.5	2.4
199	1	M	2.3	1.6	2.0	2.5	2.0	2.2	2.3	2.0
200	1	M	2.7		2.7	2.3	2.0	2.3	2.2	2.1
201	1	M	2.2	2.5	2.4	2.5	2.3	2.4	2.4	1.9
202	1	M	2.3		2.3	2.5	2.6	2.5	2.6	2.8
203	1	M	3.5		3.5	2.5	2.0	2.7	2.3	1.7
204	1	M	3.1	2.6	2.9	2.7	2.0	2.5	2.4	4.3
205	1	M	2,4		2.4	2.4	2.1	2.3	2.3	2.4
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
206	1	F	2.6		2.6	2.8	2.2	2.5	2.5	3.1
207	1	F	2.4	2.5	2.5	2.5	2.2	2.3	2.4	2.7
208	1	M	2.6	2.4	2.5	2.4	2.3	2.4	2.4	1.9
209	1	M	2.8	2.5	2.7	2..6	2.1	2.5	2.4	3.6
210	1	M		2.4	2.4	2.5	2.4	2.4	2.5	1.2
211	1	M	2.0	1.8	1.9	2.4	2.0	2.1	2.2	1.8

212	1	M	3.1		3.1	3.2	2.1	2.8	2.7	2.4
213	1	M		2.3	2.3	2.8	2.0	2.4	2.4	1.4
214	1	M		2.4	2.4	2.3	2.2	2.3	2.3	2.8
215	1	F	2.0	2,2	2,1	2.3	2.3	2.2	2.3	2.1
216	1	F		2.5	2.5	3.1	2.4	2.7	2.8	4.0
217	1	M	1.3		1.3	2.0	2.4	1.9	2.2	2.7
218	1	M	3.0		3,0	2.0	2.5	2.5	2.3	2.2
219	1	M	2.1	3.5	2.8	2.7	2.1	2.5	2.4	4.1
220	1	M	2.5	2.0	2.3	2.5	4.2	3.0	2.4	3.8
221	2	F	2.5		2.5	2.7	2.4	2.5	2..6	3.0
222	2	M		2.4	2.4	2.6	3.2	2.7	2.9	2.3
223	2	M		1.7	1..7	2.5	3.3	2.5	2.9	2.1
224	2	M	2.1	2.3	2.2	2.7	2.8	2.6	2.8	3.8
225	2	F	2.5		2.5	2.9	2.5	2.6	2.7	3.1
226	2	M	2.6		2.6	2.7	2.6	2.6	2.7	2.5
227	2	F		2.7	2.7	2.6	2.6	2.6	2.6	3.1
228	2	M	3.0		3.0	2.8	3.3	3.0	3.1	2.8
229	2	F	2.2	2.4	2.3	2.8	2.5	2.5	2.7	2.5
230	2	M	1.4	2.1	1.8	2.7	2,9	2.5	2.8	2.1
231	2	F	2.6		2.6	3.0	2.6	2.7	2.8	2.7
232	2	F		2.2	2.2	3.1	3.3	2.7	3.2	2.7
233	2	M	2.5	2.1	2.3	2.6	2.8	2.6	2.7	3.2
234	2	F		2.1	2.1	2.3	2.5	2.4	2.4	2.4
235	2	M	2.2	2.5	2.4	2.7	3.3	2.8	3.0	2.3
236	2	M		2.6	2.6	2.7	3.2	2.4	3.0	2.4
237	2	M	2.4		2.4	2.5	3.2	2.8	2.9	2.8
238	2	M	3.3		3.3	3.6	3.7	3.7	3.7	3.7
239	2	M	2.6		2,6	2.9	2.8	2.4	2.9	2.4
240	2	F		2.7	2.7	3.0	2.6	2.7	2.8	2.7
241	2	F		2.5	2.5	2.7	2.8	2.7	2.8	3.3
242	2	M	2.3		2.3	2.6	2.4	2.4	2.5	2.4
243	2	M	2.1		2.1	3.1	4.0	3.1	3.6	4.1
244	2	M	3.2	2.7	3.0	2.5	2.8	2.9	2.8	2.6
245	2	M		2.4	2.4	2.9	3.4	2.9	3.2	3.0
246	2	M	3.8		3.8	3.2	3.3	3.4	3.3	2.6
247	2	F		2.9	2.9	3.1	2.4	2.8	2.8	2.9
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
248	2	M		2.8	2.8	3.4	3.6	3.3	3.5	3.7
249	2	M		2.6	2.6	2.6	2.8	2.7	2.7	2.8
250	2	M	2.8	2.6	2.7	2.8	3.5	3.0	3.2	3.4
251	2	F	3.4		3.4	2.5	2.7	2.9	2.6	2.9
252	2	M		3.0	3.0	3.2	2.6	2.9	2.9	3.6
253	2	F	3.3		3.3	2.6	2.5	2.8	2.6	2.3
254	2	F		2.5	2.5	2.6	3.0	2.7	2.8	3.1

255	2	F		2.7	2.7	2.7	2.8	2.7	2.8	3.4
256	2	M		2.4	2.4	2.7	2.3	2.5	2.5	3.3
257	2	M	1.5		1.5	2.8	2.7	2..3	2.8	3.6
258	2	M		2.2	2.2	2.6	4.0	2.9	3.3	3.6
259	2	M	3.1		3.1	2.6	3.7	2.8	3.1	2.8
260	2	M	3.0		3.0	2.6	2.7	2.8	2.7	3.0
261	2	F	3.2		3.2	2.3	2.9	2.8	2.6	3.1
262	2	M		1.8	1.8	2.4	3.1	2.4	2.8	1.4
263	2	M		2.7	2.7	2.8	2.9	2.8	2.9	2.3
264	2	M	1.9		1.9	3.2	2.8	2.6	3.0	2.7
265	2	M		1.5	1.5	2.6	3.3	2.5	3.0	2.8
266	2	M		1.6	1.6	3.0	3.1	2.6	3.1	2.6
267	2	M		2.5	2.5	3.1	3.3	3.0	3.2	3.4
268	2	M	2.7		2.7	2.3	2.9	2.6	2.6	2.7
269	2	M		1.6	1.6	3.1	2.5	2.4	2.8	2.9
270	2	M		1.3	1.3	2.6	2.9	2.3	2.8	3.1
271	2	M		1.9	1.9	2.6	2.9	2.5	2.8	3.5
272	2	M	2.0		2.0	2.7	2.7	2.5	2.7	3.3
273	2	M	1.6		1.6	2.6	2.5	2.2	2.6	3.0
274	2	M		1.6	1.6	1.9	3.5	2.3	2.7	2.4
275	2	M	2.7		2.7	1.9	2.8	2.5	2.4	2.2
276	2	M	3.3		3.3	2.8	2.3	2.8	2.6	3.0
277	2	M		2.4	2.4	2.3	2.4	2.4	2.4	2.2
278	3	M		2.3	2.3	2.5	3.4	2.7	3.0	3.3
279	3	M		1.7	1.7	3.0	3.0	2.6	3.0	3.3
280	3	M	2.9		2.9	2.4	2.2	2.2	2.3	2.1
281	3	M		2.0	2.0	2.7	2.1	2.3	2.4	2.7
282	3	F	1.6		1.6	3.0	2.2	2.3	2.6	2.4
283	3	M	1.5	1.6	1.6	2.8	2.3	2.2	2.6	3.7
284	3	F	2.6	2.0	2.3	2.3	2.1	2.2	2.2	3.1
285	3	M	1.8	1.9	1.9	3.0	2.2	2.4	2.6	3.1
286	3	M		2.0	2.0	2.7	2.2	2.3	2.5	3.6
287	3	M	2.3		2.3	2.9	2.4	2.5	2.7	2.4
288	3	M	3.1		3.1	2.6	2.5	2.7	2.6	3.3
289	3	F	2.1	1.6	1.9	2.6	2.4	2.3	2.5	3.2
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
290	3	F	2.2		2.2	2.7	3.4	2.8	3.1	4.3
291	3	M	1.7		1.7	3.3	2.5	2.5	2.9	4.1
292	3	M	3.4		3.4	2.3	2.6	2.8	2.0	3.7
293	3	M		2.2	2.2	2.5	3.3	2.7	2.4	3.3
294	3	F	2.4		2.4	2.5	2.9	2.6	2.7	2.8
295	3	F	2.7		2.7	2.4	3.5	2.8	3.0	3.0
296	3	M		2.4	2.4	2.4	3.7	2.8	3.1	2.3
297	3	M	1.8	1.5	1.7	2.6	2.3	2.2	3.0	3.1

298	3	M		2.7	2.7	22.8	2.0	2.3	2.4	3.5
299	3	M		1.5	1.5	2.6	2.8	2.3	2.7	3.1
300	3	M		2.2	2.2	2.7	2.5	2.5	2.6	3.7
301	3	M		1.9	1.9	2.6	3.1	2.5	2.9	3.8
302	3	M		2.5	2.5	2.4	2.3	2.4	2.4	3.1
303	3	M		2.0	2.0	2.4	3.6	2.7	3.0	2.5
304	3	F	2.7		2.7	2.4	3.2	2.8	2.8	2.4
305	3	F	2.0	1.9	2.0	2.5	3.1	2.5	2.8	2.6
306	3	M		3.1	3.1	2.5	2.6	2.7	2.6	2.2
307	3	M		2.8	2.8	2.4	2.8	2.7	2.6	2.9
308	3	M		1.7	1.7	2.8	2,7	2.4	2.8	3.0
309	3	M	2.2	1.9	2.1	2.4	2.9	2.5	2.7	1.5
310	3	M	2.2	1.5	1.9	2.3	2.3	2.2	2.3	3.9
311	3	M		1.9	1.9	2.3	2.6	2.3	2.5	2.1
312	3	M		2.2	2.2	2.6	2.9	2.6	2.7	2.9
313	3	M		2.0	2.0	2.9	2.4	2.4	2.7	3.8
314	3	M		2.8	2.8	2.5	2.8	2.7	3.7	3.3
315	3	M		1.8	1.8	2.7	2.5	2.3	2.6	2.8
316	3	M	2.6		2.6	2.8	2.0	2.5	2.4	3.4
317	3	M	2.4	1.3	1.9	2.7	2.0	2.2	2.4	3.6
318	3	M		4.0	4.0	2.3	2.6	3.0	2.5	2.5
319	3	F	3.3	2.8	3.1	2.5	2,4	2.7	2.8	2.3
320	3	M		1.6	1.6	2.6	2.9	2.4	2.8	2.3
321	3	M		2.1	2..1	2.6	2.7	2.5	2.4	2.7
322	3	M	1.8		1.8	3.1	2.5	2.5	2.8	2.5
323	3	M	2.8		2.8	2.6	2.0	2.5	2.3	1.6
324	3	M	3.3		3.3	2.6	2.8	2.9	2.7	1.7
325	3	M	2.4		2.4	2.6	3.3	2.8	3.0	2.3
326	3	M		2.4	2.4	2.7	2.0	2.4	2.4	1.6
327	3	M		3.3	3.3	2.7	2.0	2.7	2.4	2.5
328	3	M	2.1		2.1	2.9	2.2	2.4	2.6	2.9
329	3	M	1.9	1.2	1.6	2.5	2.3	2.1	2.4	2.6
330	3	M		2.1	2.1	2.7	2.5	2.4	2.6	2.8
331	3	M		2.6	2.6	2.5	2.6	2.6	2.6	2.6
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	GCPA
332	3	M	2.4	2.8	2.6	2.7	2.3	2.5	2.5	3.4
333	3	F	2.2	1.7	2.0	2.4	2.8	2.4	2.6	2.5
334	3	M		2.4	2.4	2.4	2.5	2.4	2.5	2.1
335	3	M		2.7	2.7	2.9	2.8	2.8	2.9	3.9
336	3	M	3.4		3.4	2.7	2.2	2.8	2.5	2.3
337	3	M	2.3		2.3	2.8	2.5	2.5	2.7	2.8
338	3	M		2.1	2.1	2.8	2.1	2.3	2.5	3.3
339	3	M		1.6	1.6	2.8	2.6	2.3	2.7	2.9
340	3	M		1.6	1.6	2.6	2.1	2.1	2.7	2.1

341	3	M	2.2	2.4	2.3	2.5	3.0	2.6	2.8	2.8
342	3	M		1.8	1.8	2.7	3.5	2.7	3.1	2.7
343	3	F	3.6		3.6	2.7	2.7	3.0	2.7	2.7
344	3	M	2.8		2.8	2.3	3.6	2.9	3.0	2.3
345	3	M	1.6	1.9	1.8	2.5	3.1	2.1	2.8	2.8
346	3	M	2.7	3.0	2.9	3.3	2.3	2.8	2.8	2.5
347	3	M		2.4	2.4	2.5	2.6	2.5	2.6	2.6
348	3	M		2.2	2.2	2.7	2.1	2.3	2.4	2.4
349	3	M	2.9	1.3	2.1	2.7	2.0	2.3	2.4	2.1
350	3	F		2.3	2.3	2.8	2.2	2.4	2.5	4.0
351	3	M		1.9	1.9	2.6	3.2	2.6	2.9	3.1
352	3	F	2.2		2.2	2.5	2.5	2.4	2.5	2.6
353	3	F		2.3	2.3	2.7	2.4	2.5	2.6	3.3
354	3	F	2.5		2.5	2.8	2.0	2.4	2.4	3.5
355	3	M	2.3	1.8	2.1	2.4	2.5	2.3	2.5	2.9
356	3	M	2.6		2.6	2.6	2.8	2.7	2.7	2.4
357	3	M		3.4	3.4	2.3	2.8	2.8	2.6	1.3
358	3	M	3.7		3.7	3.0	2.3	3.0	2.7	3.3
359	3	M	2.6		2.6	2.6	2.5	2.6	2.6	3.4
360	3	M		2.6	2.6	2.6	2.0	2.4	2.3	3.9
361	3	M		1.8	1.8	2.9	2.0	2.2	2.5	3.1

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S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
1	1	M	2.5		2.5	2.3	2.9	2.6	2.6	3.4
2	1	M		2.6	2.6	2.4	2.3	2.4	2.4	3.4
3	1	F		2.1	2.1	2.3	2.0	2.1	2.2	0.8
4	1	M	2.4		2.4	2.5	2.0	2.4	2.3	3.2
5	1	F	3.0		3.0	2.6	2.1	2.6	2.3	2.3
6	1	F		2.0	2.0	2.5	2.2	2.2	2.4	3.1
7	1	M	2.6		2.6	2.7	2.5	2.6	2.6	3.1
8	1	F	2.7		2.7	2.9	2.6	2.7	2.8	2.6

9	1	M	1.1		1.1	2.8	2.3	2.1	2.6	3.2
10	1	F	3.6	2.2	2.9	2.5	2.2	2.5	2.4	3.9
11	1	F	2.7		2.7	2.8	2.8	2.8	2.8	3.0
12	1	M		3.2	3.2	2.3	2.2	2.6	2.3	2.6
13	1	M		1.9	1.9	2.7	2.0	2.2	2.4	1.4
14	1	M		2.2	2.2	3.0	2.1	2.4	2.6	4.2
15	1	M	2.9		2.9	2.6	2.0	2.5	2.3	2.2.
16	1	F	4.0		4.0	3.0	2.3	3.1	2.7	1.3
17	1	M	3.3		3.3	2.8	2.3	2.8	2.6	2.3
18	1	M	2.8		2.8	2.9	2.7	2.5	2.8	2.4
19	1	F		2.8	2.8	2.6	2.0	2.5	2.3	2.4
20	1	F		1.7	1.7	2.7	2.0	2.1	2.4	2.3
21	1	F	2.7		2.7	2.7	2.0	2.5	2.4	2.1
22	1	F		2.2	2.2	2.7	2.4	2.4	2.6	2.7
23	1	M	3.5		3.5	2.4	2.1	2.7	2.3	3.5
24	1	M	3.2		3.2	3.2	2.4	2.9	2.8	4.0
25	1	M	2.5		3.5	2.7	2.5	2.9	2.6	2.3
26	1	F		2.7	2.7	2.9	2.4	2.7	2.7	2.1
27	1	F		2.2	2.2	2.6	2.4	2.4	2.5	2.8
2.8	1	M		1.4	1.4	2.4	2.1	2.0	2.3	3.1
29	1	M		2.0	2.0	2.7	2.6	2.4	2.7	3.6
30	1	M	3.2		3.2	2.8	2.1	2.7	2.5	2.3
31	1	F	2.4	1.5	2.0	3.4	2.7	2.7	3.1	3.6
32	1	F	2.2	1.0	1.6	2.4	2.4	2.1	2.4	1.2
33	1	F	2.6	1.8	2.2	2.8	2.4	2.5	2.6	3.0
34	1	F	3.8		3.8	2.7	3.0	3.2	2.9	2.9
35	1	F	2.3		2.4	2.7	2.2	2.4	2.5	2.8
36	1	M		2.9	2.9	3.0	2.0	2.6	2.5	3.6
37	1	F	2.3		2.3	2.4	2.3	2.3	2.4	2.2
38	1	F	3.1		3.1	2.6	2.4	2.7	2.3	2.7
39	1	F	3.8		3.8	2.6	2.5	3.0	2.6	2.2

S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
40	1	M	3.7		3.7	3.2	1.4	3.1	2.8	3.0
41	1	M		0.8	0,8	3.1	2.6	2.2	2.9	2.7
42	1	F	4.0		4.0	2.7	2.2	3.0	2.5	1.8
43	1	F	2.2		2.2	2.6	2.4	2.4	2.5	3.7
44	1	F	1.3		1.3	2.4	2.1	1.9	2.3	2.7
45	1	M	3.1		3.1	3.1	2.7	3.0	2.9	2.4
46	1	F	3.1		3.1	2.7	2.2	2.7	2.5	3.7
47	1	M	2.6		2.6	2.4	2.0	2.3	2.2	3.3
48	1	M	3.5		3.5	3.1	2.3	3.1	3.0	2.2
49	1	F	2.7		2,7	2.7	21	2.8	2.4	1.9

50	1	M	1.7		1.7	2.3	2.5	2.2	2.3	3.4
51	1	M	2.4		2.4	2.6	2.5	2.5	2.6	2.7
52	1	F	2.8		2.8	3.2	2.6	2.9	2.9	3.2
53	1	M		2.6	2.6	2.5	2.1	2.4	2.3	2.5
54	1	M		2.3	2.3	2.8	2.1	2.4	2.5	2.2
55	1	F	3.0		3.0	2.4	2.5	2.6	2.5	2.5
56	1	M	2.5		2.5	2.7	2.1	2.4	2.4	2.2
57	1	M	2.1		2.1	2.3	2.0	2.1	2.2	2.6
58	1	M	2.8		2.8	2.8	2.6	2.7	2.7	2.9
59	1	M	2.0		2.0	2.8	2.4	2.4	2.6	3.2
60	1	F	2.4		2.4	2.7	2.0	2.4	2.4	1.9
61	1	M	2.3		2.3	2.3	2.8	2.5	2.6	3.0
62	1	F	2.2		2.2	2.3	2.2	2.2	2.3	1.4
63	1	M	3.5		3.5	2.4	2.2	2.7	2.3	2.7
64	1	M		2.0	2.0	2.6	2.3	2.3	2.5	2.1
65	1	M	2.4	1.6	2.0	2.6	2.3	2.3	2.5	3.4
66	1	F	2.6		2.6	2.4	2.7	2.6	2.6	2.2
67	1	M	1.9		1.9	2.3	2.6	2.3	2.5	1.5
68	1	M	3.5		3.5	2.3	2..4	2.7	2.4	1.0
69	1	M	2.9		2.9	2.4	2.8	2.7	2.6	3.5
70	1	M	3.5		3.5	2.5	4.2	3.4	3.4	1.9
71	1	M		2.7	2.7	2.3	2.3	2.4	2.3	3.3
72	1	M	3.8		3.8	2.7	2.1	2.9	2.4	1.7
73	1	F	2.7		2.7	2.6	2.1	2.5	2.4	2.0
74	1	F		1.8	1.8	2.7	2.2	2.2	2.5	2.9
75	1	M	3.0	1.8	2.4	2.8	2.5	2.6	2.7	2.2
76	1	F		2.2	2.2	2.8	2.4	2.5	2.6	3.5
77	1	F	2.6	1.7	2.2	2.3	2.4	2.4	2.5	3.6
78	1	F	2..9		2.9	2.4	2.1	2.5	2.3	3.0
79	1	F	2.5		2.5	2.9	2.2	2.5	2.6	4.1
80	1	M	2.0	2.0	2.0	2.5	2.4	2.3	2.5	2.9
81	1	M	2.3		2.3	2.3	2.1	2.2	2.2	1.0
S/so	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
82	1	M	2.4	2.0	2.2	2.7	2.5	2.5	2.6	1.8
83	1	F	2.4		2.4	2.9	2.4	2.4	2.7	4.0
84	1	M	2.4	2.2	2.3	2.8	2.4	2.5	2.6	2.8
85	1	F	3.5		3.5	2.7	2.2	2.8	2.5	3.6
86	1	M	2.8		2.8	3.0	2.2	2.7	2.6	2.1
87	1	F	3.1		3.1	2.7	2.2	2.7	2.5	2.7
88	1	F	2.8		2.8	2.5	2.4	2.6	2.5	2.2
89	1	M	2.4		2.4	2.8	2.7	2.6	2.8	3.0
90	1	F	3.5		3.5	3.1	2.1	2.9	2.6	2.2
91	1	M	2.9		2.9	2.4	2.1	2.5	2.3	1.3
92	1	F		1.9	1.9	2.9	2.1	2.3	2.5	1.8

93	1	M		1.9	1.9	2.3	2.1	2.1	2.2	1.1
94	1	M	2.3		2.3	3.0	2.5	2.6	2.8	1.2
95	1	F	2.8		2.8	2.6	2.5	2.6	2.6	2.7
96	1	M	2.6		2.6	3.2	2.5	2.8	2.9	1.5
97	1	M		1..7	1.7	2.3	2.3	2.1	2.3	2.4
98	1	F	1.8	1.7	1.8	2.5	2.1	2.1	2.3	2.3
99	1	M	3.3		3.3	2.8	2.1	2.7	2.5	2.4
100	1	F	2.1		2.1	2.3	2.0	2.3	2.4	3.7
101	1	F	2.5		2.5	3.1	2.2	2.6	2.7	1.3
102	1	F		1.6	1.6	2.5	2.3	2.1	2.4	1.7
103	1	M	2.8		2.8	2.7	2.2	2.6	2.5	3.4
104	1	F	3.5		3.5	3.6	2.3	3.1	3.0	2.6
105	1	M	3.0		3.0	2.3	2.2	2.5	2.3	2.7
106	1	M	2.2	1.9	2.1	2.9	2.0	2.5	2.7	1.9
107	1	M		1.9	1.9	2.3	2.2	2.1	2.3	2.1
108	1	F	3.8		3.8	2.7	2.0	2.8	2.4	2.1
109	1	F	2.7		2.7	2.4	2.3	2.5	2.4	2.2
110	1	M	2.7		2.7	2.4	2.4	2.2	2.4	3.1
111	1	F	3.0		3.0	2.8	2.2	2.7	2.3	1.3
112	1	F	3.2		3.2	2.7	2.3	2.7	2.5	3.5
113	1	F	2.7		2.7	2.4	2.0	2.4	2.2	2.2
114	1	M		2.3	2.3	2.3	2.3	2.3	2.3	2.5
115	1	M		2.0	2.0	2.8	3.2	2.7	3.0	2.5
116	1	M		1.8	1.8	2.3	2.3	2.1	2.3	1.1
117	1	F	3.0		3.0	2.5	3.3	2.9	2.9	3.2
118	1	M	2.6		2.6	2.5	2.3	2.5	2.4	3.4
119	1	M	2.3		2.3	2.4	2.5	2.4	2.5	2.3
120	1	F	2.7	2.2	2.5	2.4	2.1	2.3	2.3	2.4
121	1	M		2.9	2.9	3.0	2.0	2.6	2.5	3.5
122	1	M	3.7		3.7	3.2	2.4	3.1	2.8	3.1
123	1	M		0.9	0.9	3.1	2.6	2.2	2.9	2.7
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPG
124	1	M	3.1		3.1	3.1	2.7	3.0	2.9	2.3
125	1	M	2.6		2..6	2.4	2.0	2.3	2.2	3.2
126	1	M	3.5		3.5	3.2	2.8	3.2	3.0	2.2
127	1	M	1.7		1.7	2.3	2.5	2.2	2.4	3.3
128	1	M		2.4	2.4	2.6	2.5	2.5	2.6	2.6
129	1	M		2.6	2.6	2.5	2.1	2.4	2.3	2.5
130	1	M	2.3		2.3	2.9	2.1	2.4	2.5	2.5
131	1	F	2.4	1.5	2.0	3.4	2.7	2.7	3.1	3.5
132	1	F	2.6	1.8	2.2	2.8	2.4	2.5	2.6	3.1
133	1	M		2.3	2.3	2.8	2.1	2.4	2.5	2.6
134	1	M	2.5		2.5	2.7	2.1	2.4	2.4	2.3
135	1	M	2.1		2.1	2.3	2.2	2.2	2..3	2.5

136	1	M		2.0	2.0	2.8	2.4	2.4	2.6	3.2
137	1	M	2.5		2.5	2.3	2.9	2.6	2.6	3.5
138	1	M		2.6	2.6	2.4	2.3	2.4	2.4	3.4
139	1	F	3.0		3.0	2.6	2.1	2.6	2.4	2.6
140	1	M	2.6		2.6	2.7	2.5	2.6	2.6	3.1
141	1	M	1.1		1.1	2.8	2.3	2.1	2.3	2.7
142	1	M		3.2	3.2	2.3	2.2	2.6	2.3	2.7
143	1	M		1.9	1.9	2.7	2.0	2.2	2.4	1.4
144	1	M	2.2		2.2	3.0	2.1	2.4	2.6	4.1
145	1	M	2.9		2.9	2.6	2.0	2.5	2.3	2.3
146	1	F	4.1		4.1	3.1	2.3	3.2	2.7	1.3
147	1	F		2.8	2.8	2.6	2.0	2.5	2.3	2.4
148	1	M	3.6		3.6	2.4	2.1	2.7	2.3	3.5
149	1	M	3.2		3.2	3.2	2.4	2.9	2.8	4.0
150	1	M		3.2	3.2	2.8	2.1	2.7	2.5	2.4
151	1	M		2.3	2.3	2.3	2.8	2.5	2.6	3.1
152	1	M	3.5		3.5	2.2	2.3	2.7	2.3	2.7
153	1	M		2.0	2.0	2.6	2.3	2.3	2.5	2.2
154	1	M	2.4	1.6	2.0	2.6	2.3	2.3	2.5	3.3
155	1	M	1.9		1.9	2.3	2.6	2.3	2.5	1.5
156	1	M	3.5		3.5	2.3	2.4	2.7	2.4	1.0
157	1	M	2.9		2.9	2.4	2.8	2.7	2.6	3.6
158	1	F		2.2	2.2	2.3	2.8	2.5	2.3	3.1
159	1	F	2.6		2.6	2.4	2.7	2.6	2.6	2.2
160	1	M	1.9		1.9	2.3	2.6	2.3	2.5	1.4
161	1	M	3.5		3.5	2.3	2.4	2.7	2.4	1.1
162	1	M		3.8	3.8	2.7	2.1	2.9	2.4	1.8
163	1	M	3.0	1.8	2.4	2.3	2.5	2.4	2.4	2.2
164	1	M	2.0	2.0	2.0	2.5	2.4	2.3	2.5	2.4
165	1	M		2.3	2.3	2.3	2.1	2.2	2.2	1.2
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
166	1	M	2.4	2.0	2.2	2.7	2.5	2.5	2.6	1.7
167	1	M	2.2	2.4	2.3	2.8	2.4	2.5	2.6	2.8
168	1	M	2.8		2.8	3.0	2.2	2.7	2.6	2.2
169	1	F	2.4		2.4	2.8	2.7	2.6	2.8	3.1
170	1	F	2.9		2.9	2.4	2.1	2.5	2.3	1.4
171	1	M		1.9	1.9	3.0	2.5	2.6	2.8	1.3
172	1	M	2.6			2.6	3.2	2.5	2.9	1.5
173	1	M		1.7	1.7	2.3	2.3	2.1	2.3	2.4
174	1	M	3..3		3.3	2.8	2.1	2.7	2.5	2.5
175	1	M	2.8		2.8	2.7	2.2	2.6	2.5	3.4
176	1	M	3.0		3.0	22.3	2.2	2.5	2.3	3.6
177	1	M	2.2	1.9	2.1	2.9	2.6	2.5	2.7	1.8
178	1	M	1.9		1.9	2.3	2.2	2.1	2.3	2.2

179	1	M	2.7	1.3	2.0	2.4	2.4	2.3	2.4	3.1
180	1	M		2.3	2.3	2.3	2.3	2.3	2.3	2.6
181	1	M		2.9	2.9	2.4	2.1	2.5	2.3	1.4
182	1	F	1.9		1.9	2.3	2.1	2.1	2.2	1.2
183	1	M	2.3		2.3	3.0	2.5	2.6	2.8	1.1
184	1	F	2.8		2.8	2.6	2.6	2.5	2.6	2.7
185	1	M		2.6	2.6	3.2	2.5	2.8	2.9	1.6
186	1	F		1.7	1.7	2.3	2.3	2.1	2.3	2.4
187	1	M	3.3		3.3	2.3	2.1	2.4	2.5	2.4
188	1	M	2.8	2.6	2.7	2.7	2.2	2.5	2.5	3.4
189	1	F	3.0		3.0	2.3	2.2	2.5	2.3	3.6
190	1	F	2.2	1.9	2.1	2.9	2.6	2.5	2.8	1.8
191	1	F		1.9	1.9	2.3	2.2	2.1	2.3	2.1
192	1	M	2.7	1.3	2.0	2.4	2.4	2.3	2.4	3.2
193	1	M	2.3		2.3	2.4	2.3	2.3	2.4	2.5
194	1	M	2.7	1.3	2.0	2.4	2.4	2.3	2.4	3.2
195	1	F		1.6	1.6	2.5	2.3	2.1	2.4	1.7
196	1	M		2.8	2.8	2.7	2.2	2.6	2.5	3.4
197	1	F	3.3		3.3	2.8	2.1	2.7	2.5	2.4
198	1	F	1.9	1.7	1.8	2.3	2.3	2.1	2.3	2.4
199	1	F	2.3	2.4	2.4	3.0	2.5	2.6	2.8	1.2
200	1	M		2.6	2.6	3.2	2.5	2.8	2.9	1.4
201	1	M	2.5		2.5	2.3	2.9	2.6	2.6	3.4
202	1	F		2.6	2.6	2,4	2.3	2.4	2.4	3.3
203	1	F	2.4	2.2	2.3	2.5	2.2	2.3	2.4	3.2
204	1	F	3.2		3.2	2.3	2.2	2.6	2.3	2.5
205	1	M	2.9		2.9	2.6	2.0	2.5	2.3	2.3
206	1	M		3.2	3.2	3.2	2.4	2.9	2.8	2.4
207	1	F	2.7	2.2	2.5	2.4	2.1	2.3	2.3	2.4
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
208	1	M	2.3		2..3	2.4	2.5	2.4	2.5	2.2
209	1	M		2.6	2.6	2.5	2.3	2.5	2.4	2.3
210	1	M		1.8	1.8	2.3	2.4	2.2	2.4	1.2
211	1	F		2.9	2.9	3.0	2.0	2.6	2.5	3.5
212	1	M	3.7		3.7	3.2	2.4	3.1	2.8	3.1
213	1	M		0.9	0.9	3.1	2.6	2.2	2.9	2.7
214	1	M	3.1		3.1	3.1	2.7	3.0	2.9	2.5
215	1	F	2.6		2.6	2.4	2.1	2.4	2.3	3.2
216	1	F	3.5		3.5	3.1	2.8	3.1	3.0	2.3
217	1	F	1.7		1.7	2.3	2.5	2.2	2.4	3.5
218	1	M		2.4	2.4	2.6	2.5	2.5	2.6	2.7
219	1	M	2.6		2.6	2.5	2.1	2,4	2.3	2.3
220	1	F		2.3	2.3	2.8	2.1	2.4	2.5	2.2
221	1	F	2.4	1.6	2.0	2.6	2.3	2.3	2.5	3.4

222	1	F		2.3	2.3	2.3	2.4	2.3	2.4	1.0
223	1	F	2.9	2.4	2.7	2.4	2.8	2.6	2.6	3.5
224	1	M		2.5	2.5	2.5	4.2	3.1	3.4	1.8
225	1	M		2.7	2.7	2.7	2.1	2.5	2.4	1.7
226	1	M	1.8	2.8	2.3	2.8	2.5	2.5	2.7	2.2
227	1	M	2.0	2.5	2.3	2.5	2.4	2.4	2.5	2.9
228	1	M		2.3	2.3	2.3	2.1	2.2	2.2	1.1
229	1	M	2.0	2.7	2.4	2.7	2.5	2.5	2.6	1.8
230	1	F		3.2	3.2	3.2	2.6	3.0	2.9	3.2
231	1	F		2.7	2.7	2.7	2.1	2.5	2.4	1.9
232	1	M		2.4	2.4	2.6	2.5	2.5	2.6	2.6
233	1	M	2.6		2.6	2.5	2.1	2.4	2.3	2.5
234	1	F		2.3	2.3	2.8	2.1	2.4	2.5	2.2
235	1	F	2.5		2.5	2.7	2.2	2.5	2.5	2.3
236	1	F	2.1		2.1	2.3	2.0	2.1	2.2	2.6
237	1	M	2.8		2.8	2.8	2.6	2.7	2.7	2.9
238	1	M	2.0		2.0	2.8	2.6	2.4	2.7	3.2
239	1	M	2.3		2.3	2.3	2.8	2.5	2.6	3.0
240	1	M	3.5		3.5	2.4	2.3	2.7	2.4	2.6
241	1	M	2.6		2.6	2.7	2.5	2.6	2.6	3.2
242	1	F	1.1		1.1	2.8	2.3	2.1	2.6	3.4
243	1	F		3.2	3.2	2.3	2.2	2.6	2.3	2.7
244	1	M		1.9	1.9	2.7	2.0	2.2	2.4	1.4
245	1	M	2.2		2.2	3.0	2.1	2.4	2.6	4.1
246	1	F	2.9		2.9	2.6	2.0	2.5	2.3	2.3
247	1	F	3.6		3.6	2.4	2.1	2.7	2.3	3.6
248	1	M		3.2	3.2	3.2	2.4	2.9	2.8	4.0
249	2	M	2.6	2.2	2.4	2.9	2.4	2.6	2.7	2.3
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
250	2	F	3.2		3.2	2.6	2.3	2.7	2.5	1.7
251	2	F	3.0		3.0	2.7	2.6	2.8	2.7	2.9
252	2	F	2.6		2.6	3.1	2.6	2.9	2.8	1.9
253	2	M		2.3	2.3	2.6	2.5	2.5	2.6	3.3
254	2	M	3.4	2.5	3.0	2.8	2.7	2.8	2.8	4.0
255	2	M		2.5	2.5	3.1	2.6	2,7	2.8	3.4
256	2	M	2.0		2.0	2.6	2.3	2.3	2.5	3.8
257	2	M		1.9	1.9	2.8	2.3	2.3	2.6	2.9
258	2	M	2.0	1.8	1.9	2.6	2.2	2.2	2.4	3.1
259	2	F	3.1		3.1	2.6	2.4	2.7	2.5	2.2
260	2	F	3.8		3.8	3.0	2.7	3.2	2.9	2.2
261	2	F	2.3		2.3	2.6	2.3	2.4	2.5	3.8
262	2	M	2.4		2.4	3.0	2.2	2.5	2.6	4.2
263	2	M	3.1		3.1	2.8	2.4	2.8	2.6	4.3
264	2	M	2.3	1.2	1.8	3.0	2.7	2.5	2.9	3.3

265	2	F	3.3		3.3	2.7	2.2	2.7	2.5	3.1
266	2	M	3.3		3.3	2.5	2.1	2.6	2.3	4.6
267	2	F	2.6		2.6	2.8	2.5	2.6	2.7	3.6
268	2	F		2.4	2.4	3.2	2.3	2.6	2.8	3.3
269	2	F	2.5		2.5	2.7	2.4	2.5	2.6	3.9
270	2	M	2.1		2.1	2.8	2.5	2.5	2.7	3.3
271	2	M	2.3		2.3	3.0	2.3	2.5	2.7	3.1
272	2	M	2.7		2.7	2.9	2.8	2.8	2.9	3.9
273	2	M		1.6	1.6	2.6	2.3	2.2	2.5	3.6
274	2	F		2.2	2.2	2.8	2.6	2.5	2.7	3.6
275	2	M		2.0	2.0	3.1	2.8	2.6	3.0	3.1
276	2	M	3.1		3.1	3.3	2.4	2.9	2.9	2.4
277	2	F	2.3		2.3	2.5	2.6	2.5	2.6	3.9
278	2	M		2.4	2.4	2.6	2.4	2.5	2.5	3.3
279	2	M		1.7	1.7	2.6	2.3	2.2	2.5	2.3
280	2	F		2.3	2.3	2.8	2.7	2.6	2.8	3.0
281	2	F	1.9		1.9	3.1	2.5	2.5	2.8	3.5
282	2	F		2.1	2.1	3.0	2.3	2.5	2.7	4.4
283	2	M	2.6	2.0	2.3	2.9	2.4	2.5	2.7	3.1
284	2	M		2.4	2.4	2.9	3.0	2.8	3.0	3.5
285	2	F	1.7	1.4	1.6	2.6	2.4	2.2	2.5	2.6
286	2	F		1.7	1.7	2.5	2.9	2.4	2.7	2.6
287	2	M		2.8	2.8	3.2	2.6	2.7	2.9	4.3
288	2	F		3.1	3.1	3.0	2.8	3.0	2.9	4.3
289	2	F		2.3	2.3	2.6	2.5	2.5	2.6	3.2
290	2	F	3.1		3.1	2.8	2.4	2,8	2.6	4.2
291	2	F	2.0	1.8	1.9	2.6	2.2	2.2	2.4	3.2
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPG
292	2	M	2.0		2.0	2.6	2.3	2.3	2.5	3.6
293	2	M	2.3	2.4	2.4	3.0	2.3	2.6	2.7	3.2
294	3	F	3.0	2.0	2.5	2.6	2.2	2.4	2.4	1.3
295	3	F	3.0	2.4	2.9	2.3	2.2	2.5	2.3	2.3
296	3	F	2.2		2.2	2.9	2.2	2.4	2.6	2.2
297	3	F	2.4	1.3	1.9	2.7	2.1	2.2	2.4	2.2
298	3	M	2.0		2.0	2.2	2,1	2.3	2.5	2.3
299	3	M	1.8		1.8	3.0	2.2	2.3	2.6	3.5
300	3	M		2.1	2.1	2.5	2.4	2.3	2.5	1.4
301	3	M		1.5	1.5	2,5	2.2	2.1	2.4	1.8
302	3	F	2.3	2.1	2.2	2.8	2.3	2.4	2.6	1.1
303	3	M		2.4	2.4	3.2	2.2	2.6	2.7	2.0
304	3	M		1..9	1.9	2.6	2.8	2.4	2.7	2.1
305	3	M		1.9	1.9	2.6	2.5	2.3	2.6	2.0
306	3	M	1.3	1.5	1.4	2.3	3.3	2.3	2.3	2.0
307	3	F	2.7	1.3	2.0	2.8	2.7	2.5	2.8	1.9

308	3	F	2.5		2.5	2.9	3.5	3.0	3.2	3.5
309	3	F	2.2	1.0	1.6	2.8	2.0	2.1	2.4	2.1
310	3	F	3.7		3.7	3.0	3.2	3.3	3.1	2.4
311	3	M	3.8		3.8	2.8	2.2	2,9	2.5	2.1
312	3	M	1.6	2.0	1.8	2.8	2.6	2.4	2.7	2.6
313	3	M		1.7	1.7	2.6	2.2	2.2	2.4	2.1
314	3	F	2.2		2.2	2.6	2.6	2.5	2.6	2.8
315	3	F	2.4		2.4	2.4	2.8	2.5	2.6	2.1
316	3	F	2.2	1.9	2.1	2.8	2.9	2.6	2.9	2.1
317	3	M	2.4		2.4	2.6	2.9	2.6	2.7	2.1
318	3	F	2.5	1.7	2.1	2.5	2.5	2.3	2.4	2.3
319	3	M	1.1	3.2	2.1	2.7	2.9	2.6	2.8	2.1
320	3	F		2.5	2.5	2.9	2.7	2.7	2.8	2.5
321	3	M	2.0		2.0	2.9	2.4	2.5	2.7	1.9
322	3	F	3.3		3.3	2.8	3.1	3.1	3.0	3.3
323	3	M	1.8		1.8	2.7	2.8	2.4	2.8	2.5
324	3	M	1.9		1.9	2.8	2.5	2.4	2.7	2.8
325	3	M	3.5		3.5	2.5	2.0	2.6	2.3	1.6
326	3	M		2.0	2.0	2.7	2.0	2.2	2.4	3.1
327	3	M		3.5	3.5	2.6	2.6	2.9	2.6	1.6
328	3	F	2.3		2.3	2.8	2.4	2.5	2.6	3.1
329	3	M		2.7	2.7	3.3	2.8	2.9	3.1	3.1
330	3	F	2.2		2.2	2.4	2.5	2.4	2.5	2.4
331	3	F	2.0	3.0	2.5	2.6	2.2	2.4	2.4	1.4
332	3	F	3.0	2.7	2.9	2.3	2.2	2.5	2.3	2.2
333	3	F	2.2		2.2	2.9	2.2	2.4	2.6	2.3

S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
334	3	M		2.4	2.4	3.2	2.2	2.6	2.7	2.1
335	3	M		1.9	1.9	2.6	2.8	2.4	2.7	2.2
336	3	F	2.4	1.3	1.9	2.7	2.1	2.2	2.4	2.3
337	3	M	1.6	2.0	1.8	2.8	2.6	2.4	2.7	2.5
338	3	F	2.0		2.0	2.8	2.1	2.3	2.5	2.4
339	3	F	2.3	2.1	2.2	2.3	2.4	2.3	2.4	1.2
340	3	F	2.7	1.3	2.0	2.8	2.7	2.5	2.8	1.8
341	3	M		1.7	1.7	2.6	2.2	2.2	2.4	2.3
342	3	M	2.4		2.4	2.6	.2.9	2.6	2.7	.2.2
343	3	F	2.5		2.5	2.9	3.5	3.0	3.2	3.4
344	3	F	2.2	1.0	1.6	2.8	2.0	2.1	2.4	2.2
345	3	F	3.7		3.7	3.0	3.2	3.3	3.1	2.5
346	3	F	2.2		2.2	2.6	2.6	2.5	2.6	2.7
347	3	F		2.4	2.4	2.4	2.8	2.5	2.6	2.3
348	3	M	1.9	2.2	2.1	2.8	2.9	2.6	2.9	2.2
349	3	F	2.5	1.7	2.1	2.5	2.3	2.3	2.4	2.4
350	3	M	1.1	3.2	2.2	2.7	2.9	2.6	2.8	2.3

351	3	F	3.3		3.3	2.3	3.1	2.9	2.2	3.2
352	3	F	2.3		2.3	2.8	2.4	2.5	2.6	3.0
353	3	F	2.4		2.4	2.4	2.8	2.5	2.6	2.2
354	3	M	2.4		2.4	2.6	2.9	2.6	2.8	2.1
355	3	F	2.2	1.9	2.1	2.8	2.9	2.6	2.9	2.0
356	3	F		2.5	2.5	2.9	2.7	2.7	2.8	2.5
357	3	F	3.3		3.3	3.8	3.1	3.4	3.5	3.2
358	3	M	2.3	2.4	2.4	3.0	2.3	2.6	2.7	3.3
359	3	F	2.0		2.0	2.8	2.1	2.3	2.5	2.4
360	3	F	1.8		1.8	3.0	2.2	2.3	2.6	3.5
361	3	F		2.1	2.1	2.5	2.4	2.3	2.5	1.5

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S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
1	1	F	2.0		2.0	2.7	2.1	2.3	2.4	1.8
2	1	M	3.1		3.1	3,0	2.3	2.8	2.7	1.6
3	1	M	2.5		2.5	2.4	2.0	2.3	2.2	2.9
4	1	F	1.9		1.9	2.8	2.1	2.2	2.5	2.1
5	1	M	2.6	1.7	2.2	2.9	2.9	2.7	2.9	2.5
6	1	M		2.3	2.3	3.0	2.0	2.4	2.5	2.4
7	1	F		2.0	2.0	2.8	2.0	2.3	2.4	1.4
8	1	M		1.0	1.0	2.6	2.3	2.0	2.5	1.5
9	1	M	2.2	1.7	2.0	2.6	2.3	2.3	2.5	1.0
10	1	M	2.2		2.2	3.1	2.7	2.7	2.9	0..9
11	1	F	2.8		2.8	2.4	2.4	2.5	2.4	1.9
12	1	F	3.8		3.8	2.8	2.8	3.1	2.3	2.1
13	1	F	2.6		2.6	2.8	2.2	2.5	2.5	1.3
14	1	M		1.8	1.8	2.5	3.1	2.5	2.8	3.5
15	1	F	3.0		3.0	2.9	2.4	2.8	2.7	3.9
16	1	M	2.4		2.4	2.7	2.2	2.4	2.5	1.9

17	1	M	2.9		2.9	2.3	2.1	2.4	2.2	2.2
18	1	F	2..2		2.2	2.4	2.3	2.3	2.4	1.6
19	1	F	1.9		1.9	2.8	2.7	2.5	2.8	0.5
20	1	F		1.4	1.4	2.5	2.0	2.0	2.3	1.2
21	1	M	3.5		3.5	2.5	2.0	2.7	2.3	1.7
22	1	M	1.7	2.6	2.2	2.6	2.3	2.4	2.5	2.9
23	1	M	2.2	0.9	1.6	2.4	2.0	2.0	2.2	1.1
24	1	M	1.5	1.5	1.5	2.5	2.2	2.1	2.4	1.6
25	1	M	2.2	1.9	2.1	2.9	2.4	2.5	2.7	0.8
26	1	M		1.1	1.1	2.8	2.0	2.0	2.4	2.7
27	1	M	3.5		3.5	3.0	2.3	2.9	2.7	1.8
28	1	M		2.1	2.1	2.4	2.0	2.2	2.2	2.4
29	1	M	2.8		2.8	2.9	2.0	2.6	2.5	1.7
30	1	M		1.9	1.9	2.9	2.1	2.3	2.5	0.8
31	1	M		2.3	2.3	2.6	2.9	2.6	2.7	1.4
32	1	F	2.2		2.2	3.4	2.6	2.7	3.0	2.9
33	1	M	3.1		3.1	3.0	2.4	2.8	2.7	3.5
34	1	F	2.4		2.4	2.7	2.4	2.5	2.6	3.3
35	1	M		3.1	3.1	3.2	2.1	2.8	2.7	2.7
36	1	F	1.3		1.3	2.3	2.4	2.0	2.4	1.7
37	1	F		1.0	1.0	3.0	2.5	2.2	2.8	0.5
38	1	F	3.0		3.0	2.7	2.6	2.8	2.7	1.4
39	1	M	3.0		3.0	2.7	2.5	2.7	2.6	2.2
40	1	F	4.0		4.0	2.6	2.0	2.9	2.3	1.6
41	1	F	2.4		2.4	2.4	2.3	2.4	2.4	0.5

S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
42	1	M	2.0		2.0	2.8	2.2	2.3	2.5	3.3
43	1	F	2.2		2.2	2.3	2.0	2.2	2.2	1.1
44	1	M	2.3		2.3	2.3	2.2	2.3	2.3	1.7
45	1	M	2..3		2.3	2.5	2.4	2.4	2.5	3.4
46	1	M	2.6		2.6	2.4	2.3	2.4	2.4	0.9
47	1	M	2.6		2.6	2.4	2.4	2.5	2.4	3.7
48	1	M	2.8		2.8	2.7	2.6	2.7	2.7	2.7
49	1	F	3.0		3.0	2.4	2.1	2.7	2.5	2.5
50	1	M		2.0	2.0	2.9	2.1	2.3	2.5	3.9
51	1	M	1.7	0.8	1.3	3.2	2.0	2.2	2.6	0.1
52	1	M	1.2		1.2	2.5	2.2	2.0	2.4	1.4
53	1	F	2.6		2.6	2.3	2.3	2.4	2.3	1.2
54	1	F		2.6	2.6	2.6	2.4	2.5	2.5	1.3
55	1	M	2.7		2.7	3.2	2.2	2.7	2.7	1.4
56	1	F	4.2		4.2	2.8	2.0	3.0	2.4	2.9
57	1	F		1.8	1.8	2.5	2.1	2.1	2.3	1.7
58	1	F	2.8		2.8	2.6	2.5	2.6	2.6	1.7
59	1	M	2.5		2.5	2.8	2.0	2.4	2.4	2.1

60	1	F	2.4		2.4	2.3	2.1	2.3	2.2	0.7
61	1	M	2.7		2.7	3.0	2.2	2.6	2.6	0.8
62	1	M		2.1	2.1	2.5	2.1	2.2	2.3	2.2
63	1	M	2.6		2.6	2.6	2.0	2.4	2.3	1.9
64	1	F	3.1		3.1	2.7	2.1	2.6	2.4	1.3
65	1	F	3.0		3.0	2.8	2.1	2.6	2.5	2.4
66	1	M	2.2		2.2	2.5	2.1	2.3	2.6	0.5
67	1	F	2.9		2.9	2.4	2.0	2.4	2.2	1.9
68	1	M	3.5		3.5	3.0	2.3	2.9	2.7	1.9
69	1	M		1.5	1.5	2.3	2.1	2.1	2.5	1.7
70	1	M	3.4		3.4	2.9	2.0	2.3	2.5	3.7
71	1	M	1.8	2.8	2.3	3.0	2.3	2.5	2.7	2.4
72	1	M	1.9		1.9	2.7	2.3	2.3	2.5	1.4
73	1	M	3.2		3.2	2.3	2.2	2.6	2.3	1.4
74	1	M		2.3	2.3	3.0	2.1	2.5	2.6	1.3
75	1	M	3.8		3.8	2.4	2.2	2.8	2.3	1.2
76	1	F	4.0		4.0	2.7	2.4	3.0	2.6	1.3
77	1	M	2.6		2.6	2.3	2.2	2.4	2.3	1.5
78	1	M		1.3	1.3	3.8	3.3	2.8	3.6	0.8
79	1	F	3.8		3.8	2.9	2.1	2.9	2.5	3.3
80	1	M		2.0	2.0	3.2	2.4	2.5	2.8	1.4
81	1	M	2.9		2.9	2.5	2.4	2.6	2.5	1.5
82	1	F	2.7		2.7	3.0	2.0	2.6	2.5	4.6
83	1	F	1.7	2.1	1.9	2.4	2.2	2.2	2.3	0.9
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
84	1	F	2.4		2.4	2.5	2.0	2.3	2.3	0.4
85	1	F	2.1		2.1	2.6	2.0	2.2	2.3	3.2
86	1	M		2.5	2.5	2.3	2.4	2.4	2.4	3.3
87	1	M	2.4		2.4	2.3	2.7	2.5	2.5	1.4
88	1	F	2.8		2.8	2.3	2.0	2.4	2.2	1.6
89	1	F	3.5		3.5	2.5	2.2	2.7	2.4	1.0
90	1	M	2.9		2.9	2.4	2.4	2.6	2.4	0.8
91	1	F	2.8		2.8	2.5	2.1	2.5	2.3	0.4
92	1	M	3.1		3.1	2.5	2.2	2.6	2.4	1.6
93	1	M	3.0		3.0	2.4	2.9	2.5	2.7	2.5
94	1	F	3.8		3.8	2.9	2.4	3.0	2.7	4.5
95	1	M		1.7	1.7	2.9	2.0	2.2	2.5	4.1
96	1	M	2.7		2.7	2.4	2.5	2.5	2.5	1.4
97	1	F		1.7	1.7	2.6	2.2	2.2	2.4	0.4
98	1	F	2.8		2.8	2.8	2.2	2.6	2.5	1.4
99	1	M	2.8		2.8	3.0	2.1	2.6	2.6	1.0
100	1	F		1.8	1.8	2.9	2.2	2.3	2.6	1.4
101	1	F	3.5		3.5	2.4	3.0	3.0	2.7	1.4
102	1	F	2.6		2,6	3.0	2.1	2.6	2.6	2.3

103	1	F	2.4		2.4	3.5	2.0	2.6	2.8	0.6
104	1	M	3.1		3.1	2.4	2.3	2.6	2.4	2.3
105	1	F	2.5		2.5	2.3	2.2	2.3	2.3	1.1
106	1	M	2.3	0.5	1.4	2.7	2.4	2.2	2.6	0.7
107	1	F	2.8		2.8	2.8	2.5	2.7	2.7	1.3
108	1	M	3.0		3.0	2.8	2.0	2.6	2.4	1.3
109	1	M		1.3	1.3	2.5	2.2	2.0	2.4	1.6
110	1	M	3.0		3.0	2.9	3.2	3.0	3.1	2.1
111	1	M	2.0		2.0	2.4	2.2	2.2	2.3	1.7
112	1	M		2.3	2.3	3.0	2.4	2.6	2.7	4.6
113	1	M	3.3		3.3	2.7	2.2	2.7	2.5	2.2
114	1	M	1.5		1.5	2.3	2.4	2.1	2.4	2.0
115	1	F	2.8		2.8	2.9	2.4	2.7	2.7	2.3
116	1	F		1.6	1.6	2.4	2.3	2.1	2.4	1.4
117	1	F	2.4		2.4	2.9	2.4	2.6	2.7	1.1
118	1	M	2.4		2,4	3.0	2.4	2.6	2.7	2.1
119	1	F		2.5	2.5	2.8	2.3	2.5	2.6	2.5
120	1	M		1.0	1.0	3.6	2.9	2.5	3.3	1.9
121	1	M		2.5	2.5	2.3	2.4	2.4	2.4	3.2
122	1	F	2.8		2.8	2.3	3.0	2.4	2.2	1.7
123	1	F	3.5		3.5	2.5	2.2	2.7	2.4	1.1
124	1	M	2.4		2.4	2.3	2.7	2.5	2.5	1.3
125	1	M	2.9		2.9	2.4	2.4	2.6	2.4	0.7
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
126	1	F	2.1		2.1	2.6	2.0	2.2	2.3	3.1
127	1	F	2.4		2.4	2.5	2.0	2.3	2.3	0.5
128	1	F	1.7	2.1	1.9	2.4	2.2	2.2	2.3	0.8
129	1	F	2.7		2.7	3.0	2.0	2.6	2.5	4.5
130	1	M	2.9		2.9	2.5	2.4	2.6	2.5	1.5
131	1	M		2.0	2.0	3.2	2.4	2.5	2.8	1.3
132	1	F	3.8		3.8	2.9	2.1	2.9	2.5	3.2
133	1	M		1.3	1.3	3.8	3.3	2.8	3.6	0.7
134	1	M	2.6		2.6	2.3	2.2	2.4	2.3	1.4
135	1	F	4.0		4.0	2.7	2.4	3.0	2.6	1.2
136	1	M	3.8		3.8	2.4	2.2	2.8	2.3	1.3
137	1	M		2.3	2.3	3.0	2.1	2.5	2.6	1.4
138	1	M	3.2		3.2	2.3	2.2	2.6	2.3	1.5
139	1	M	1.9		1.9	2.7	2.3	2.3	2.5	1.4
140	1	M	1.8	2.8	2.3	3.0	2.3	2.5	2.7	2.3
141	1	M	3.4		3.4	2.9	2.0	2.8	2.5	2.6
142	1	M		1.5	1.5	2.1	2.1	1.5	2.5	1.8
143	1	M	3.5		3.5	3.0	2.3	2.9	2.7	1.7
144	1	F	2.9		2.9	2.4	2.0	2.4	2.2	1.8
145	1	M	2.2		2.2	2.5	2.1	2.3	2.3	0.6

146	1	F	3.0		3.0	2.8	2.1	2.4	2.5	2.5
147	1	F	3.1		3.1	2.4	2.1	2.6	2.4	2.6
148	1	M	2.6		2.6	2.6	2.0	2.4	2.3	1.8
149	1	M		2.1	2.1	2.5	2.1	2.2	2.3	2.3
150	1	M	2.7		2.7	3.0	2.2	2.6	2.6	0.9
151	1	M	2.6		2.6	2.4	2.3	2.4	2.4	0.8
152	1	M	2.6		2.6	2.4	2.4	2.5	2.4	3.6
153	1	M	2.8		2.8	2.7	2.6	2.7	2.7	2.5
154	1	F	3.0		3.0	2.9	2.1	2.7	2.5	2.6
155	1	M		2.0	2.0	2.9	2.1	2.3	2.5	3.8
156	1	M	1.7	0.8	1.3	3.2	2.0	2.2	2.6	0.2
157	1	M	1.2		1.2	2.5	2.2	2.0	2.4	1.5
158	1	F	2.6		2.6	2.3	2.3	2.4	2.3	1.3
159	1	F		2.6	2.6	2.6	2.4	2.5	2.5	1.4
160	1	M	2.7		1.7	3.2	2.2	2.7	2.7	1.5
161	1	F	4.2		4.2	2.8	2.0	3.0	2.4	2.8
162	1	F		1.8	1.8	2.5	2.1	2.1	2.3	1.6
163	1	F	2.8		2.8	2.6	2.5	26	2.6	1.8
164	1	M	2.5		2.5	2.8	2.0	2.4	2.4	2.2
165	1	F	2.4		2.4	2.3	2.1	2.3	2.2	0.8
166	1	M	2.3		2.3	2.5	2.4	2.4	2.4	3.3
167	1	M	2..3		2.3	2.3	2.2	2.3	2.3	1.8
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
168	1	F	2.2		2.2	2.3	2.0	2.2	2.2	1.2
169	1	M	2.0		2.0	2.8	2.2	2.3	2.5	3.2
170	1	F	2.4		2.4	2.4	2.3	2.4	2.4	0.6
171	1	F	4.0		4.0	2.6	2.0	2.9	2.3	1.5
172	1	M	3.0		3.0	2.7	2.5	2.7	2.6	2.1
173	1	F	3.0		3.0	2.7	2.6	2.8	2.7	1.5
174	1	F		1.0	1.0	3.0	2.5	2.2	2.8	0.4
175	1	F	1.3		1.3	2.3	2.4	2.0	2.4	1.8
176	1	M		3.1	3.1	3.2	2.1	2.8	2.7	2.6
177	1	F	2.4		2.4	2.7	2.4	2.5	2.6	3.2
178	1	M	3.1		3.1	3.0	2.4	2.8	2.7	3.4
179	1	F	2.2		2.2	3.4	2.6	2.7	3.0	2.8
180	1	M		2.3	2.3	2.6	2.9	2.6	2.8	1.5
181	1	F	3.0		3.0	2.9	2.4	2.8	2.7	3.7
182	1	M		1.8	1.8	2.5	3.1	2.5	2.8	3.6
183	1	F	2.6		2.6	2.8	2.2	2.5	2.5	1.5
184	1	F	3.8		3.8	2.8	2.8	3.1	2.8	2.2
185	1	F	2.8		2.8	2.4	2.4	2.5	2.4	1.4
186	1	M	2.2		2.2	3.1	2.7	2.7	2.9	0.8
187	1	M	2.2	1.7	2.0	2.6	2.3	2.3	2.5	1.1
188	1	M		1.0	1.0	2.6	2.0	2.0	2.3	1.4

189	1	F		2.0	2.0	2.8	2.0	2.3	2.4	1.5
190	1	M		2.3	2.3	3.0	2.9	2.4	3.0	2.6
191	1	M	2.6		2.6	2.9	2.1	2.5	2.5	1.6
192	1	F	1.9		1.9	2.8	2.0	2.2	2.4	1.7
193	1	M	2.5		2.5	2.4	2.3	2.3	2.4	2.8
194	1	M	3.1		3.1	3.0	2.1	2.8	2.6	2.2
195	1	F	2.0		2.0	2.7	2.0	2.3	2.4	2.4
196	1	M		1.1	1.1	2.8	2.3	2,0	2.6	2.6
197	1	M	3.5		3.5	3.0	2.0	2.9	2.5	1.8
198	1	M		2.1	2.1	2.4	2.0	2.2	2.2	2.5
199	1	M	2.8		2.8	2.9	2.0	2.6	2.5	1.8
200	1	M		1.9	1.9	2.9	2.1	2.3	2.5	0.7
201	1	M	2.2	1.9	2.1	2.9	2.4	2.5	2.7	0.6
202	1	M	1.5	1.5	1.5	2.5	2.2	2.1	2.4	1.7
203	1	M	2.2	0.9	1.6	2.4	2.0	2.0	2.2	1.2
204	1	M	1.7	2.6	2.2	2.6	2.3	2.3	2.5	2.8
205	1	M	3.5		3.5	2.5	2.0	2.7	2.3	1.6
206	1	F		1.4	1.4	2.5	2.0	2.0	2.3	1.3
207	1	F	1.9		1.9	2.8	2.7	2.5	2.8	2.6
208	1	F	2.2		2.2	2.4	2.3	2.3	2.4	1.5
209	1	M	2.9		2.9	2.3	2.1	2.4	2.2	2.3
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
210	1	M	2.4		2.4	2.7	2.2	2.4	2.5	1.8
211	1	F	3.8		3.8	2.9	2.4	3.0	2.7	4.4
212	1	M		1.7	1.7	2.9	2.0	2.2	2.5	4.2
213	1	M	2.7		2.7	2.4	2.5	2.5	2.5	1.5
214	1	F		1.7	1.7	2.6	2.2	2.2	2.4	0.5
215	1	F	2.8		2.8	2.8	2.2	2.6	2.5	1.3
216	1	M	2.8		2.8	3.0	2.1	2.6	2.6	1.0
217	1	F		1.8	1.8	2.9	2.2	2.3	2.6	1.6
218	1	F	3.5		3.5	2.4	3.0	3.0	2.7	1.2
219	1	F	2.6		2.6	3.0	2.1	2.6	2.6	2.4
220	1	F	2.4		2.4	3.5	2.0	2.6	2.8	0.7
221	1	M	3.1		3.1	2.4	2.3	2.6	2.4	2.4
222	1	F	2..5		2.5	2.3	2.0	2.3	2.2	1.2
223	1	M	2.3	0.5	1.4	2.7	2.4	2.2	2.6	0.5
224	1	M		2.5	2.5	2.9	2.5	2.6	2.7	3.1
225	2	F	2.3		2,3	2.7	2.6	2.5	2.7	3.5
226	2	F	2.4		2.4	2.7	2.5	2.5	2.6	2.5
227	2	F	2.4	2.4	2.4	2.7	2.1	2.4	2.4	3.4
228	2	M	2.6		2.6	2.8	2.5	2.6	2.7	3.4
229	2	F	1.9		1.9	3.2	2.4	2.5	2.8	2.2
230	2	F	2.8		2.8	3.2	2.2	2.7	2.7	4.2
231	2	M		1.7	1.7	3.0	2.3	2.3	2.7	0.7

232	2	F	2.0	1.0	1.5	3.3	2.8	2.4	3.1	2.0
233	2	F		2.1	2.1	3.2	2.6	2.6	2.9	3.3
234	2	M		2.8	2.8	2.5	2.4	2.6	2.5	1.1
235	2	M	2.4	1.4	1.9	3.0	2.8	2.6	2.9	3.6
236	2	F	3.0		3.0	3.1	3.4	3.2	2.8	3.2
237	2	F		2.3	2.3	3.0	2.8	2.7	2.9	1.7
238	2	M	1.9		1.9	2.6	2.3	2.3	2.5	1.5
239	2	M	2.3		2.3	2.7	2.2	2.4	2.5	2.9
240	2	F	2.6		2.6	3.1	2.6	2.8	2.9	2.7
241	2	M	1.7	1.7	1.7	2.7	3.2	2.5	3.0	2.5
242	2	M	1.8	1.7	1.8	2.9	3.1	2.6	3.0	2.5
243	2	F	3.3		3.3	3.1	2.4	2.9	2.8	3.8
244	2	F	2.7		2.7	3.1	2.6	2.8	2.8	2.1
245	2	M	2.0		2.0	3.4	2.3	2.6	2.8	3.4
246	2	M	2.0		2.0	2.9	2.8	2.6	2.9	3.2
247	2	M	1.9	1.6	1.8	2.5	2.5	2.3	2.5	1.6
248	2	F	2.2		2.2	2.8	2.2	2.4	2.5	2.7
249	2	F	2.2		2.2	2.7	2.6	2.5	2.7	3.0
250	2	M		2.5	2.5	2.6	2.5	2.5	2.6	1.1
251	2	F		1.7	1.7	3.0	2.3	2.3	2.7	2.8
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
252	2	M	2.6		2.6	2.8	2.7	2.4	2.8	2.5
253	2	M		1.3	1.3	2.8	3.1	2.4	2.5	3.0
254	2	M	2.9		2.9	3.0	2.5	2.8	2.8	2.0
255	2	F	2.8		2.8	3.1	2.8	2.9	3.0	1.6
256	2	F		1.9	1.9	2.7	2.3	2.3	2.5	3.3
257	2	M		1.8	1.8	3.3	2.8	2.6	3.1	2.6
258	2	M	2.2		2.2	2.5	3.0	2.6	2.8	2.7
259	2	F	3.1		3.1	2.5	2.9	2.8	2.7	1.1
260	2	F	3.2		3.2	2.6	2.7	2.8	2.7	3.3
261	2	M	2.6		2.6	2.6	2.6	2.6	2.6	3.4
262	2	M	2.9		2.9	3.5	2.7	3.0	3.1	3.9
263	2	F	2.5		2.5	3.1	2.3	2.6	2.7	2.4
264	2	M	1.7		1.7	3.0	2.5	2.4	2.8	3.7
265	2	M	2.0		2.0	2.9	2.4	2.4	2.7	4.2
266	2	M	1.7		1.7	2.8	2.7	2.4	2.3	3.2
267	2	F	2.7		2.7	2.9	2.4	2.7	2.7	3.7
268	2	F		1.9	1.9	2.9	2.6	2.5	2.8	2.5
269	2	M	1.0	2.0	1.5	2.5	2.5	2.2	2.5	2.9
270	2	M	2.0		2.0	2.6	2.3	2.3	2.5	2.3
271	2	F	2.4		2.4	2.8	2.6	2.6	2.7	2.2
272	2	F	1.7		1.7	3.1	2.3	2.4	2.8	2.3
273	2	M	2.2		2.2	2.7	2.4	2.4	2.6	2.6
274	2	M	1.8		1.8	3.0	2.6	2.5	2.8	2.0

275	2	M		2.4	2.4	2.7	2.5	2.5	2.6	3.6
276	2	F	2.7		2.7	2.6	2.6	2.6	2.6	2.6
277	2	F	2.7		2.7	3.0	2.5	2.7	2.8	1.7
278	2	M	2.9		2.9	2.6	2.6	2.7	2.6	1.3
279	2	M	2.8		2.8	2.7	2.5	2.7	2.6	1.8
280	2	F	3.0		3.0	3.3	2.8	3.0	3.1	2.7
281	2	F	2.5		2.5	2.6	2..4	2.5	2.5	1.8
282	2	F	1.9		1.9	2.7	2.5	2.4	2.6	1.8
283	2	F	1.9		1.9	2.6	2.6	2.4	2.6	3.2
284	2	M	2.3	0.5	1.4	2.7	2.4	2.2	2.6	1.0
285	2	M		2.5	2.5	2.9	2.5	2.6	2.7	3.0
286	2	F	2.3		2.3	2.7	2.6	2.5	2.7	3.3
287	2	F	2.4		2.4	2.7	2.5	2.5	2.6	2.7
288	2	F	2.4	2.4	2.4	2.7	2.1	2.4	2.4	3.5
289	2	F	1.9		1.9	3.2	2.4	2.5	2.8	2.3
290	3	F	3.1		3.1	2.5	3.4	3.0	3.0	1.8
291	3	F		1.6	1.6	2.8	2.2	2.2	2.5	3.1
292	3	M		2.3	2.3	2.3	2.4	2.3	2.4	2.7
293	3	F	3.1		3.1	3.0	3.0	3.0	3.0	3.1
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
294	3	F	2.5		2.5	2.6	2.2	2.4	2.4	2.3
295	3	M	1.7		1.7	2.3	2.5	2.5	2.4	4.3
296	3	M	3.4		3.4	2.3	2.6	2.8	2.5	3.4
297	3	M		2.2	2.2	2.5	3.3	2.7	2.9	3.1
298	3	F	2.1	1.6	1.9	2.6	2.4	2.3	2.5	3.4
299	3	F	2.2		2.2	2.7	3.4	2.8	3.1	4.1
300	3	F	2.6	2.0	2.3	2.3	2.1	2.2	2.2	3.2
301	3	M		2.3	2.3	2.5	3.4	2.7	3.0	3.2
302	3	M		1.7	1.7	3.0	3.0	2.6	3.0	3.1
303	3	M	2.9		1.9	1.4	2.2	2.2	2.3	2.3
304	3	F	2.4		2.4	2.5	2.9	2.6	2.7	2.6
305	3	F	2.7		2.7	2.4	3.5	2.8	3.0	2.4
306	3	F	2.2	1.7	2.0	2,4	2.8	2.4	2.6	2.6
307	3	M		2.0	2.0	2.7	2.1	2.3	2.4	2.5
308	3	M	1.5	1.6	1.6	2.8	2.3	2.2	2.6	3.6
309	3	M	1.8	1.9	1.9	3.0	2.2	2.4	2.6	3.0
310	3	M		2.0	2.0	2.7	2.2	2.3	2.5	3.5
311	3	M	2.3		2.3	2.9	2.4	2.5	2.7	2.3
312	3	F	2.2		2.2	2.5	2.5	2.4	2.5	2.7
313	3	F	2.5		2.5	2.8	2.0	2.4	2.4	3.4
314	3	M	1.7		1.7	3.3	2.5	2.5	2.9	4.2
315	3	M	3.4		3.4	2.3	2.6	2.8	2.5	3.6
316	3	M		2.2	2.2	2.5	3.3	2.7	2.9	3.1
317	3	M		2.4	2.4	2.4	3.7	2.8	3.1	2.4

318	3	M		2.7	2.7	2.8	2.0	2.3	2.4	3.6
319	3	F	2.6	2.0	2.3	2.3	2.1	2.2	2.2	3.2
320	3	M	1.8	1.5	1.7	2.6	2.3	2.2	3.5	3.4
321	3	M	1.8		1.8	3.1	2.5	2.5	2.8	2.4
322	3	M	2.8		2.8	2.6	2.0	2.5	2.6	1.7
323	3	M	3.3		3.3	2.6	2.8	2.9	2.7	1.5
324	3	M	2.4		2.4	2.6	3.3	2.8	3.0	2.3
325	3	M	2.1		2.1	2.9	2.2	2.4	2.6	2.7
326	3	F	2.2		2.2	2.7	3.4	2.8	3.1	4.2
327	3	F	2.7		2.7	2.4	2.5	2.8	2.5	3.2
328	3	M		2.7	2.7	2.8	2.0	2.3	2.4	2.5
329	3	M		1.5	1.5	2.6	2.8	2.3	2.7	3.2
330	3	M		2.2	2.2	2.7	2.5	2.5	2.6	3.6
331	3	M	2.0		2.0	2.8	2.1	2.3	2.5	3.4
332	3	M	1.8		1.8	3.0	2.2	2.3	2.6	2.4
333	3	F	2.1		2.1	2.5	2.4	2.3	2.5	1.6
334	3	M		2.4	2.4	3.2	2.2	2.6	2.7	2.1
335	3	M		1.9	1.9	2.6	2.5	2.3	2.6	2.2
S/no	Code no	Sex	WAEC	NECO	SSCE	UTME	PUTME	CSUP	CUP	CGPA
336	3	M	2.3	1.3	1.8	1.5	3.3	2.2	2.4	2.3
337	3	M		1.5	1.5	2.5	2.2	2.1	2.4	1.9
338	3	F	1.8		1.8	3.0	2.2	2.3	2.6	3.5
339	3	F		2.5	2.5	2.9	2.7	2.7	2.8	2.6
340	3	F	2.2	1.9	2.1	2.8	2.9	2.6	2.9	2.1
341	3	F	2.3		2.3	2.8	2.4	2.5	2.7	3.2
342	3	M		2.1	2.1	2.7	2,5	2.4	2.6	2.7
343	3	M	1.9	1.2	1.6	2.5	2.3	2.1	2.4	2.5
344	3	M	2.1		2.1	2.9	2.2	2.4	2.6	2.7
345	3	M		3.3	3.3	2.7	2.0	2.7	2.4	2.4
346	3	M	1.8		1.8	3.1	2.5	2.5	2.8	2.6
347	3	M		2.1	2.1	2.6	2.7	2.5	2.7	2.8
348	3	M		1.6	1.6	2.6	2.9	2.4	2.8	2.2
349	3	M		4.0	4.0	2.3	2.6	3.0	2.5	2.6
350	3	M	2.4	1.3	1.9	2.7	2.0	2.2	2.4	3.4
351	3	M		2.6	2.6	2.3	2.0	2.5	2.4	3.3
352	3	F	2.2		2.2	2.6	2.6	2.5	2.6	2.6
353	3	F	2.2	1.0	1.6	2.8	2.0	2.1	2.4	2.3
354	3	F	2.7	1.3	2.0	2.8	2.7	2.5	2.8	1.6
355	3	M		2.4	2.4	3.2	2.2	2.6	2.7	2.3
356	3	M		1.9	1.9	2.6	2.8	2.4	2.7	2.1
357	3	M		1.7	1.7	2.6	2.2	2.2	2,4	2.4
358	3	M	2.4		2.4	2.6	2.9	2.6	2.8	2.3
359	3	M	1.9		1.9	2.8	2.9	2.5	2.9	2.1
360	3	M	2.4		2.4	3.0	2.3	2.5	2.7	3.0

361	3	M		2.7	2.7	3.3	2.8	2.9	3.1	3.2

Note on code number: 1= Sciences, 2= Social Sciences, 3= Arts.