RELATIONSHIP BETWEEN ACHIEVEMENT MOTIVATION AND ACADEMIC PERFORMANCE OF SCIENCE SENIOR SECONDARY SCHOOL STUDENTS IN KANO, KANO STATE, NIGERIA

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A DISSERTATION SUBMITTED TO SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA.IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF EDUCATIONAL PSYCHOLOGY DEGREE

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DECLARATION

I hereby declare that this Dissertation entitled**"RELATIONSHIP BETWEEN ACHIEVEMENT MOTIVATION AND ACADEMIC PERFORMANCE OF SCIENCE SENIOR SECONDARY SCHOOL STUDENTS IN KANO, KANO STATE, NIGERIA"**, has been written by me and that it is a record of my own research work. It has not been presented in any previous application for a higher degree. All quotations are indicated by quotation marks or indentation and the sources of information are specifically acknowledged by means of references.

TukurAbdullahi YANOKO _____

P14EDPC8032 Signature Date

CERTIFICATION

This Dissertationentitled**"RELATIONSHIP BETWEEN ACHIEVEMENT MOTIVATION AND ACADEMIC PERFORMANCE OF SCIENCE SENIOR SECONDARY SCHOOL STUDENTS IN KANO, KANO STATE, NIGERIA"**, submitted**by P14EDPC8032TukurAbdullahi YANOKO,** meets the regulations governing the award of Masters' Degree of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Dissertation is dedicated to my beloved Late fatherMallamAbdullahiYanoko,may his soul rest in perfect peace ameen, and to my dear mother, MalamaHafsatAdamu, my beloved wife, Aisha LawanAbdullahiand children, Hafsat (Ilham) and Late Khadijahand to all those who toil day and night to see to the improvement of the quality of Science Education in Africa at large.

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LIST OFABBREVIATIONS

AMIQ: Achievement Motivation Inventory Questionnaire

APTB: Academic Performance Test in Biology

OPERATIONAL DEFINITION OF TERMS

The following terms are operationally defined as used in this study:

Achievement Motivation: is the extent to which an individual strive to excel academically. Three activating forces of motivation are needs, drives and motives.

Needs: are general wants and desires of an individual.

Drive: is the basic activating forces behind behaviour.

Motive: is an energetic force (learned or innate) working within the individual to inspire him to act or for the satisfaction of his basic needs.

Academic Performance: refers to performance outcome of teaching and learning encounter which is measured in this study through academic performance in Biology. For the present study Academic Performance is defined as that which is indicated by the total marks in Biology test obtained by the student's out of 100 constructed by the researcher.

ABSTRACT

This study determined the relationship between achievement motivation and academic performance among science senior secondary schools students in Kano state, Nigeria. The study employed correlational design. The study was also guided by four (4) objectives, four (4) research questions and four (4) hypotheses. The population of the study consisted of 2,665 science senior secondary school students in Kano state. A sample size of 302 was randomly selected based on the recommendation of Krejcie and Morgan. Achievement Motivation Inventory Questionnaire (AMIQ) and Academic Performance Test in Biology (APTB) were used for the study. Percentage, means, standard deviation (SD), Pearson Product Moment Correlation (r) and Analysis of Variance (ANOVA) were used to answer research questions and test the null hypotheses that were raised in the study. The findings of this study reveal that there is significant relationship between achievement motivation needs and academic performance (r=0.931, p=0.001); between achievement motivation drives and academic performance (r=0.899, p=0.003); and between achievement motivation motives and academic performance (r=0.920, p=0.002). Significant differences exist in the overall achievement motivation between high, moderate and low achievers of the respondents (f=341.943; p=0.000). On the basis of these findings, the following conclusion was deduced: the respondents' achievement motivation needs is high, especially most always work very hard to be among the best students in their schools, the achievement motivation drive is high with a cumulative mean agreement of 3.4060 and achievement motivation motives is high especially majority of the respondents' like reading biography of great people inorder to learn how they overcome hurdles and achieve in life. On other hand, the following recommendations were made: Students should be well motivated through using needs, drive and a motive motivational means to improve their academic performance. Teachers and educators should focus on needs, drives and motives forms of motivation which will have greater impacts, academic counselors should organize workshop, symposia, public lectures periodically to equipped the students with needed skills to enhance their motivation, school authorities' should employ capable and qualified guidance and counselors to guide the children in building their achievement motivation and academic performance as well.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The growing concern for success, commitment and high achievement in the field of education among educationists make studies in the area of motivation as a psychological construct relevant. The control and direction of human energy plays a vital role in learning and it takes priority over other considerations about teaching. Maehr (2008), asserted that wishing to achieve control over elements of the environment and experience success to realistic gaol setting. Motives can be described as a search for some optimum level of arousal or general stimulation. Motives have two function:- they direct behaviour toward or away from some goals by potentially certain perception, behaviours and feeling rather than others. They also save to activate the organism, which becomes more aroused, the greater strength of the motive. This means that a student may learn a great deal if he is sufficiently aroused and interested.

Motivation may be regarded as something which prompts, compels and energises an individual to act or behave in a particular manner at a particular time for attaining some specific goal or purpose. Motivation is an inner condition of the organisms that initiates, energizes and directs his behaviour towards a goals; just as the need for shelter sets in motion behaviour aimed at meeting this requirement or motivation which is goal-oriented, it believed to affect human behaviour in a variety of situations like learning, thinking, perceptions, creativity and feeling.

Motivation is used by educational psychologists to describe the drive, energy and activity that an individual displays. It is of interest to psychologists to seek know why is it that one child works hard at many different tasks, and persists in the face of difficulties, while another child is rather lazy at school, has few interests, and tends to withdraw when faced with

frustration. Motivation is the force that initiates, guides, and maintains goal-oriented behaviours. The force that lies beneath motivation can be biological, social, and emotional or cognitive in nature.

Human beings are said to be extrinsically or intrinsically motivated. Intrinsic motivation is said to be derived internally in the job itself. It is that which occurs while a person is performing an activity in which he takes delight and satisfaction in doing. Intrinsic motivation is seen as internal reward, while extrinsic motivation is incentive or reward that a person can enjoy after he finishes his work. Mohammed (2016) opined that motivation holds the key to the understanding of human behaviour. According to him, motivation explains why one individual dodges work, another works normally satisfactorily enough to reach the height, while yet others resort to illegal and unconventional methods of achieving social, academic, economic and political recognition. He added that motivation should be carefully manipulated whether in the work situation or study situation, so that our students are neither under motivated or over motivated but appropriately motivated so as to be useful to themselves in their society and the world at large. The idea of motivating learners is an important aspect of effective learning.

In fact, some psychologists believe that motivation is a necessary ingredient for learning. It is believed that satisfactory school learning is unlikely to take place in the absence of sufficient motivation to learn. Students' motivation has to do with stimulating someone with the aim of making him to participate in a particular cause of action. Many motivated activities begin with a need as an internal deficiency, Need cause a drive activities which can energized motivation to develop, Drive activates a response motives designed to attain a goal. Psychologists have tried to provide the answer by identifying these activating forces (indicators of motivation) as:-

(a) Needs

(b) Drives

(c) Motives

Needs:- needs are general wants or desires of an individual. Every human being has to strive for the satisfaction of his basic needs if he has to maintain or improve or fulfil himself in the world. It implies the lack of something that if present will further the psychological and physiological equilibrium of the organism. The motivation satisfy the numerous human needs may either be cognitive or emotional, just as there are primary and secondary needs. The primary needs includes basic physiological ones like food, water, air which are innate. Secondary needs which are learned within the environment includes affections, aggression, autonomy and dominance.

Drive Needs: - drives is another fundamental indices of motivation. Drive, which is broad and general is an inference made from observed behaviour and is assumed to be the tension induced by needs. It is source of energy within the bodily structures which determines the pattern and direction of behaviour just as the motor in an engine propels and determines the functioning of the system.

Motives: - motive as a psychological process, is a desire or determination to achieve or to arrive at a certain goal. The stronger the desire, the greater will be the effort. The motive can either be conscious and unconscious. Motives are believed to possess some basic characteristics in the motivated behaviour of the organism. Firstly, motives energize and sustain behaviour, thereby arousing the organism for action. Secondly, motives direct and regulate our behaviour, promoting behaviour to be purposeful, directional and persistent. Finally, motives sensitise behaviour to be selective. For instance, a student who is motivated to excel in his examination concentrates on his studies by selecting appropriate means to reach his goal.

The need to achieve is the spring board of the achievement motive. This desire is the basic and natural as the other biological or socio-psychological needs. However, in a competitive society or set-up the desire to excel over others or achieve a higher level. Than one's peers is

intensified, which in turn may lead to a stronger drive or motive to achieve something or everything that is essential, to beat the other in the race, and consequently experience a sense of pride and pleasure in the achievement. The type of motivation produced by such desire for achievement is called achievement motivation.

We can say that the achievement motives moves or drives an individual to strive to gain mastery of difficult and challenging situations or performances in the pursuit of excellence. It comes into the picture when an individual knows that his performance will be evaluated, that the consequence of his actions will lead either to success or failure and that good performance will produce a feeling of pride in accomplishment. The achievement motive may thus be considered to be a deposition to approach success or the capacity to take pride in accomplishment when success is achieved in an activity.

Academic performance is the outcome of education the extent to which a student, teacher or institution have achieved their educational goals. According to Stumm, Sophie,Hell, Benedikt, Premuzic and Tomas (2011), achievement could also be defined as an end product of learning whose level and performance are affected by various conditions existing at the time of learning as well as the conditions intervening between learning and use (Badola, 2013). Academic performance can be described as low, or high depending on the level of performance of the learner in an academic task. It is said to be low, where a student's performance is below an expected level of accomplishment or high where, a student's performance is above an expected level of performance. Those students whose performance in a learning task is below an expected level of accomplishment are referred to as low-achieving students (Mohammed, 2016). Academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts.

Different levels of achievement motivation beliefs of students may have different levels of correlation with academic performance of students. It is against this background the researcher investigate into study of relationship between achievement motivation and academic performance among science senior secondary school students in Kano State.

1.2 Statement of the Problem

The secondary education stage plays a significant role in the quest to develop the nation's future manpower for rapid development (Quist, 2003). As a result, successive governments of Kano State have made several efforts to improve the standards of learning through infrastructural development in science secondary schools among other policy initiative. Despite all these efforts, the standard still remains low at the academic performance of students in science senior secondary schools Kano State. This has prompted many research into more effective ways of improving academic standards and have found out that inadequate motivation for students of higher learning among other factors as a disincentives to learning and academic achievement. The development of any nation is usually barometer by the degree and extent of the socio cultural, socio economic and political improvement that are brought bear through the enterprise of science and technology. Development lead to fulfilment of societal ideals considered relevant to the needs and aspiration of the society. Factors which influence such developments are based on human ability to explore, invent and utilize satisfaction of spiritual, physical and material needs and the mastery of the environment are parameters of development when applied to the human society. Education supplies people with specific skills and therefore it enables them to perform their tasks effectively. The better the performance on an individual is, the more competitive and rewarded the individual will be.

The poor academic performance of students in external examinations in Nigeria has become a source of great concern to parents, teachers, educationists, educational institutions and all stake holders in education. This calls for concerted efforts for

remediation. In everyday language achievement is something which someone has succeeded in doing. In education the term academic performance refers to the performance or accomplishment of students in academic or learning task. It is used to indicate the degree of success attained in some general or specific area of academic task. One of the urgent needs in Nigeria is how to improve the teaching and learning of science. Presently, the condition of science teaching and learning is very discouraging. The researcher observed that students' performance in science in public examinations has been consistently low. The problem of low performance in science seems not to be a new thing.

Several research has attempted to identify important factors to student success by assessing the relations among many psychological and academic variables. Few studies have used different methods to propose and test models that can be used to understand the relations among factors that influence student academic success. Various factors have been identified for low academic performance among students and these include poor study habit, laziness, ineffective classroom instructions and inadequate provision of needs, age, location, school types, anxiety, phobia, subjects, self-efficacy, self-esteem, creativity, intelligence, parental influence, teachers influence, community influence, environmental influence in science secondary schools in Kano State. But yet low achievement is still recorded in science secondary schools in Kano State. For the past five years Kano state science student have continue to record mass failure in high stakes examinations such as WAEC, NECO and UTME. It is against this background the researcher investigate into study of relationship between achievement motivation and academic performance among science senior secondary school students in Kano State.

1.3 Objectives of the Study

This study aimed to achieve the following objectives:-

1. find out if there is any significant relationship between achievement motivation of needs and academic performance among science senior secondary school students in Kano State.
2. assess the relationship between achievement motivation of drives and academic performance among science senior secondary school students in Kano State.
3. determine the relationship between achievement motivation of motives and academic performance among science senior secondary school students in Kano State.
4. examine the differences between high, moderate and low achievers in achievement motivation among science senior secondary school students in Kano State.

1.4 Research Questions

This study aimed to answer the following research questions.

1. What is the relationship between achievement motivation of needs and academic performance among science senior secondary school students in Kano State?
2. What is the relationship between achievement motivation of drives and academic performance among science senior secondary school students in Kano State?
3. What is the relationship between achievement motivation of motives and academic performance among science senior secondary school students in Kano State?
4. What is the difference between high, moderate and low achievers in achievement motivation among science senior secondary school students in Kano State?

1.5 Null Hypotheses

This study aimed to address the following hypotheses:-

1. H_{01}: There is no significant relationship between achievement motivation needs and academic performance among science senior secondary schools students in Kano State.

2. H_{02}: There is no significant relationship between achievement motivation drives and academic performance among science senior secondary schools students in Kano State.
3. H_{03}: There is no significant relationship between achievement motivation motives and academic performance among science senior secondary schools students in Kano State.
4. H_{04}: There is no significant difference in achievement motivation of high, moderate and low achievers among science senior secondary school students in Kano State.

1.6 Basic Assumptions

For the purpose of this study, the following assumptions are made:

1. Significant relationship may exists between achievement motivation of needs and academic performance among science senior secondary schools students in Kano State.
2. Significant relationship may exists between achievement motivation of drives and academic performance among science senior secondary schools students in Kano State.
3. Significant relationship may exists between achievement motivation of motives and academic performance among science senior secondary schools students in Kano State.
4. Significant differences may exists in achievement motivation of higher achievers, moderate and lower achievers among science senior secondary school students in Kano State.

1.7 Significance of the Study

Since secondary school education calls for high performance and competition toward achievement, it is therefore hoped that the findings of this study will enable educators to know how those concerned (students) achieve or fail to achieve in school. As such, this

investigation will be of tremendous assistance in the wider field of education. Furthermore, the level of students' achievement motivation are not taken into consideration when it comes to placement in school after completing their junior secondary schools. Therefore, the concern is not only with the ability to achieve but also with attitudinal and motivational factors. The results of this study will contribute towards;

1. The results of this study would clarify whether or not, there is any link with achievement motivation and academic performance. Hence, the researcher will be able to make recommendations, administrators, government teachers, parents, caregivers and students on how to handle these factors to enhance the academic performance of science senior secondary school students.
2. To point out how the negative effects of lack of achievement motivation have been highlighted by several studies and to devote concerted efforts to reduce these effects and this would facilitate the development of positive interest in the learner to excel academically. Such information would be useful to the stake holders in education.
3. Subject to the outcomes of this study, it is presumed that the identified areas where government, educational policy-makers, science and technical school board teachers, administrators at different level could come in will be brought into focus in order to bridge the gap of academic performance or the research will aid in addressing the role achievement motivation plays in task performance by monitoring special education programmes in the schools.
4. The study is also important to psychologist as it will help in understanding some human behaviours that persists over the long term without external inducements, presumably due to the effects of intrinsic interest and achievement motivation.
5. The teachers and school administrators will also benefit from the research through encouraging and motivating students at all level of hard work and learning. This can

be inform of reward to the best student and encouraging the weaker ones that they can make it.

6. Students who are the central theme of the study will stand a better chance of acquiring skills that are pertinent to enhancing their achievement motivation so as to adjust and boost their academic performance at school.
7. On the part of clinical counsellors, the findings of this study is expected to assist the counsellors to understand the role of achievement motivation, so that, the counsellors will help students see the need to develop achievement motivation.
8. However, the findings or results of the study can be published in journal, and other print media, television and radio pragrammes can also be broadcasts to feed the members of the public on the benefits of the study. Also, seminars, workshop, conference could be organized for the stake holders to have direct benefit from the findings of this study.
9. Furthermore, parents in particular can understand the benefits of the study through the Parents' Teachers' Association (PTA) and School Based Management Committee (SBMC) meetings. This can be done by the principals, school counsellors who might have benefited from the study.
10. This study would serve as a missing link to future researchers and would also add to the existing body of literature on achievement motivation and academic performance.

The study will be significant, because it explained series of anti-achievement motivation and academic performance due to inadequate attention and lack of attitude through dissemination, conference, journals and media.

1.8 Scope and Delimitation of the Study

The study covered Achievement motivation, three indices of motivation viz; needs, drives, motives and academic performance among students of science senior secondary schools in Kano State. It was delimited to SS 2 students; both boys and girls and was

confined to four (4) public secondary schools. The choice of these schools was because the community where they are based comprised of people representing the entire geographical region of the country, and proximity of the schools is also another reason.

The research limited the scope to science senior secondary school students and which do not include the junior part, In addition to this even the technical senior secondary school students and Private senior secondary schools are not included.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter deals with review of literature that relate directly or indirectly with the variables of the research topic among others. This chapter therefore focuses on scholarly contributions in the concept of motivation; theories of motivation; achievement motivation in school; and issues relating to the relationship between achievement motivation, and academic performance in schools. The following are areas of the review:

2.2 Motivation

2.3 Types of Motivation

2.3.1. Intrinsic Motivation

2.3.2. Extrinsic Motivation

2.3.3. Achievement Motivation

2.3.4. Forms of Achievement Motivation

2.3.5. Achievement Motivation in School

2.3.6. How to Develop Achievement Motivation

2.3.7. Measurement of Achievement Motivation

2.4. Academic Performance

2.4.1. Determination of Performance in School Work

2.4.2. Relationship between Achievement Motivation and Academic Performance

2.5. Theoretical Framework:

2.6. Conceptual Framework

2.7. Review of Empirical Studies

2.8. Summary

2.2. Motivation

Psychologists believe that motivation is a necessary ingredient for learning (Singh, 2011). Satisfactory school learning is unlikely to take place in absence of sufficient motivation to learn (Lopez, 2008). Denhardt (2008), defined motivation as "what causes people to behave as they do" Lawler (1994) said "motivation is goal directed". Motivation outlines the achievement and pursuit of goals (Denhardt 2008). Pettinger (1996) defined motivation as environmentally dependent. Campbell and Pritchard (1976) defined motivation as being the set of psychological processes that cause the initiation, direction, intensity, and persistence of behavior. Denhardt and Aristigueta (2008) outlined motivation is not: directly observable, the same as satisfaction, always conscious, and directly controllable.

Denhardt (2008) argued that motivation is not directly observable. Motivation is an internal state that causes people to behave in a particular way to accomplish particular goals and purposes (Denhardt, 2008). Motivation is not directly controllable: motivation is not something that people do to others and motivation occurs within people's minds and hearts (Denhardt 2008). Motivation is not the same as satisfaction: satisfaction is past oriented, whereas motivation is future oriented (Denhardt, 2008).

The concept of motivation, which is goal-oriented, is believed to affect human behavior in a variety of situations like learning, thinking, perceptions, creativity and feeling. Motivation is used by educational psychologists to describe the drive, energy and activity that an individual displays. It is of interest to psychologists to seek know why is it that one child works hard at many different tasks, and persists in the face of difficulties, while another child is rather lazy at school, has few interests, and tends to withdraw when faced with frustration.

Motivation is the force that initiates, guides, and maintains goal-oriented behaviours. The forces that lies beneath motivation can be biological, social, and emotional or cognitive in nature. Motivation is a kind of internal force which arouses, regulates, directs and sustains human action Young as cited in Mangal (2013). Atkinson, perceived motivation as the

arousal of a tendency to act and to produce one or more effects as cited in Mangal (2013). Maslow, maintained that, motivation is a constant, unending, fluctuating complex concept and that it is an almost universal characteristic of the state of affairs of every organism as cited in (Mangal, 2013).

2.3. Types of Motivation

The Self-determination theory distinguishes between different types of motivation on the different reasons or goals that give rise to an action (Ryan & Deci 2000). The Self-determination theory distinguishes between two types of motivation, which are intrinsic motivation and extrinsic motivation (Ryan & Deci 2000).

Motivation can be broadly classified into two types;

1. Intrinsic Motivation.
2. Extrinsic Motivation.

2.3.1. Intrinsic Motivation

Intrinsic motivation, occurs when there is no obvious external reward behind an action (Haruna, 2016). While, (Ryan & Deci, 2000) see motivation as the activity is done out of the free choice of the individual. Intrinsically motivated behaviours are seen when there is no other apparent reward except the activity itself (Deci, 1985). Malone & Lepper (1987) defined intrinsic motivation as what people will do without external inducement. Haruna, (2016) viewed intrinsic motivation as patterns that have been associated with high perceived ability and control, realistic task analysis and planning and the belief that effort increases one's ability and control. This type of motivation is directly linked with the natural instincts, urges and impulses of the organism. The individual, who is intrinsically or naturally motivated, perform an act because he/she finds interest within the activity. He/she is engaged in learning something because he/she derives pleasure in learning that thing. The activity carries its own reward and the individual take genuine interest in performing the activity not due to some outside motives and goals.

When a student tries to solve a mathematical problem and drives pleasure in the task of solving it or tries to read poetry and the reading itself gives him pleasure, we can say that he is intrinsically motivated. In these cases the source of pleasure lies within the activities. He solves the problems or reads the poetry for his own sake. Such type of motivation has real values in the learning task as it creates spontaneous attention and interest and sustains it throughout.

2.3.2. Extrinsic Motivation.

According to Haruna, (2016), extrinsic motivation is a construct that is relevant whenever an activity is done in order to attain some reward. Extrinsically motivated behaviours are those where the controlling mechanism is easily seen (Deci, 2000). An extrinsic orientation toward learning is characterized by a concern with external reasons for working, such as the judgment of others regarding one's performance, grades or some anticipated reward (Goldberg, 1994). In this type of motivation, the source of pleasure does not lie within the task. Such kind of motivation has no functional relationships to the task. The individual does or learns something not for its own sake, but as a means of obtaining desired goals or getting some external reward. Working for a better grade or honour, learning a skill to earn the livelihood, receiving praise and blame, rewards and punishment etc. all belong to this category.

In comparison to Extrinsic and Intrinsic Motivation, as a source of spontaneous inspiration and stimulation, brings better results in the teaching-learning process. Therefore, it is always better to make use of intrinsic motivation, whenever possible. In most cases, it is not appropriate to make use of intrinsic motivation, the use of extrinsic motivation should not be suspended (Kaushik & Rani, 2005). Depending upon the learning and nature of the task, the choice for providing appropriate motivation should be provided made by the teacher so that the learner may take profound interest in the learning activity.

Motivation is generally defined as internal condition that stimulates, direct and maintains behavior. There is a strong relationship between learning and motivation. According to Abraham Maslow when the need for love and belongingness are met, individual can then focus on higher level needs of intellectual achievement. At this stage urge to learn increases (Woolfolk, 2004). Motivating students to learn in school is a topic of great concern for educationist today. Motivating students so that they can succeed in school is one of the greatest challenges of this century. Lack of motivation is a big hurdle in learning and a pertinent cause in the deterioration of education standards. According to Deci & Ryan (2000) motivation is greatly appreciated because of the consequences it produces.

Motivation should, therefore, be perceived as a broad and diverse concept, which seeks to explain why, and how the individual behaves in various situations. Since the living organism particularly the human beings is an energy system, motivation implies that the organism must be properly aroused or the level of energy being enhanced, pushed towards a reproductive direction. . But what exactly is responsible for the motivation of and individual? What are the real activating force that push and pull an individual to move or act for achieving a specific goal? Psychologists have tried to provide the answer by identifying these activating forces (indicators of motivation) as:

(a) Needs

(b) Drives

(c) Motives

Needs: - needs are general wants or desires. Every human being has to strive for the satisfaction of his basic needs if he has to maintain or improve or fulfil himself in the world.

Nothing can be said about the number of the individual's needs, while some scholars hold that the number of individuals need is infinite, Murray have provided a definite number. Murray (1949), as cited in Mangal (2013) has given a list of 37 needs. The needs where basically divided into two (2) broad categories, namely:-

i. Biological Needs: - All our bodily or organic needs fall into this category. They may be further divided into viz:

a. The need for oxygen, water and food.
b. The need for rest, regular elimination of waste product, protection, regulation of internal body temperature, sleep.
c. The need for satisfaction of the sex desire, to seek sex-experience.
d. The sensory needs includes physical contact, sensory stimulation, stimulus variability and manipulation.

ii. Socio-psychological Needs:- these needs is associated with cultural environments of an individual. Although such needs are not linked with the survival of the organism or species, yet deprivation of these may lead to a psychological state, thereby seriously affecting its survival and welfare. These needs may be classified in the following ways:-

a. The need for freedom or gaining independence.
b. The need for security.
c. The need for love and affection.
d. The needs to achieve.
e. The need for recognition or social approval.
f. The need for company.
g. The need for self-assertion.
h. The need for self-expression or self-actualization.

Drive Needs: - any need give rise to a drive which may be defined as an aroused awareness, tendency or a state of heightened tension that sets off reactions in an individual and sustains them for increasing his general activity level. The existence of a need moves or drives the individual from within and direct his activities to a goal that may bring the satisfaction of that need. The strength of the stimuli generated by the related needs.

Drive is one of the fundamental by-product of motivation, which is a broad and general an inference made from observed behaviour and is assumed to be the tensions induced by needs. Thus to be motivated is a constant need. There are times when one faces a period of de-motivation and everything seems weak. It is then that they need to find what would motivate them back into direction. Drive of any nature is divided into two (2) categories as follows:-

a. The biological or primary drives these includes hunger, thirst, escape from pain and the sex drive.
b. The socio-psychological or secondary drives, these includes fear or anxiety, desire for approval, struggle for achievement, aggression and dependence.

Motives: - this is the desire or determination to achieve or arrive at a certain goal. The stronger the desire, the greater will be the effort. Motive can be considered to be an energetic force or tendency (learned or innate) working within the individual to compel, persuade or inspire him to act either for the satisfaction of his basic needs or the attainment of some specific goals. There are a variety of motive based on the basic human needs, this includes;

a. Achievement motive
b. Aggression motive
c. Affiliation motive
d. Hunger motive.
e. Thirst motive.
f. Sex motive
g. Maternal motive

2.3.3. Achievement Motivation

Achievement motivation has been defined as the extent to which individuals differ in their need to strive to attain rewards, such as physical satisfaction, praise from others and feelings of personal mastery (McClelland, 1985). People with high achievement motives will act in ways that will help them to outperform others, meet or surpass some standard of

excellence, or do something unique (Schmidt & Frieze, 1997). Most students are influenced by a need to achieve to a certain level. Those students, who held a high desire of success, work hard to achieve (Zenzen, 2002).

Individuals with high achievement motives usually act in ways that will enable them to outperform others, meeting or surpassing some standards of excellence or do something unusual (Schmidt & Frieze, 1997). Many students are influenced by a need to achieve to a certain degree (Awan, 2011). Achievement motivation could be seen as self- determination to success in whatever activities one engages in, be it academic work, professional work, sporting events, among others (Tella, 2007). Gestinde (2000) points out that the urge to achieve varies from one individual to another while the need to achieve is very high in some individuals, it may be very low for others based on socialization processes and learning experiences. David McClelland is most noted with the modern study of achievement motivation. He and his associates coined the term n-Ach which denotes need for achievement (Mc Clelland, 1961; Mc Clelland & Winter, 1969). This theory states that people will do what they have been rewarded for doing under appropriate conditions. This theory deals with the perceived causes of success and failure, the characteristics of causal thinking and subsequent emotional experiences in relation to achievement behaviours (Awan, 2011). Moula (2010) links academic to achievement motivation and sees this as the need or desire to excel in academic work as people who are motivated are likely to perform well in their examinations.

Achievement motives: the need to achieve is the spring-board of the achievement motive. This desire is as basic and natural as the other biological or socio-psychological needs. However, in a competitive society or set-up the desire to excel over others or achieve a higher level than one's peers is intensified which in turn may lead to a stronger drive or motive to achieve something or everything that is essential to beat others in the race and consequently experience a sense of pride and pleasure in the achievement. The type of motivation produced

by such desire for achievement is called the achievement motivation and has been defined in various ways. Two such definitions are now given; '(moves or drives an individual to strive to gain mastery of difficult and challenging situations or performances in the pursuit of excellence)'. It comes into the picture when an individual knows that his performance will be evaluated, that the consequence of his actions will lead either to success or failure and that good performance will produce a feeling of pride in accomplishment. The achievement may thus be considered to be a disposition to approach success or the capacity to take pride in accomplishment when success is achieved in an activity.

McClelland (1961), McClelland & Winter (1969) Need for Achievement (nAch) is one of the psychological motives that play an important role in success and achievements of a man. Motivation as an academic engagement refers to "cognitive, emotional, and behavioural indicators of student investment in and attachment to education" (Tucker, Zayco, & Herman, 2002). People with high achievement motives will act in ways that will help them to outperform others, meet or surpass some standard of excellence, or do something unique (Smith, 2011). All students are influenced by a need to achieve to a certain degree. Those students, who hold a high desire of success, work hard to achieve (Zenzen, 2002).

Research indicates that when students adopt mastery goals, they tend to engage in more effective cognitive processing strategies (Noar, Anderman, Zimmerman and Cupp, 2005). Social goals are another important type of goals, although not examined at length as mastery and performance goals (Dowson & McInerney, 2001). In these goals social reasons are the main concerns for trying to achieve in academics. According to Maehr (2008) achievement motivation is largely social psychological in nature. It often occurs within groups, where interpersonal interactions can undermine or facilitate engagement in the tasks to be done.

In a research comprising several field studies and laboratory experiments, Boggiano (1992) revealed that achievement motivation positively influenced academic performance. It

was found that motivational orientation predicted children's standardized achievement scores (Boggiano, 1992). Children with an intrinsic motivation orientation had higher reading and math scores and higher overall achievement scores compared to their extrinsic counterparts (Boggiano, 1992). There is a significant correlation between academic achievement and motivation (Sikwari 2014) and motivation has impact on academic performance of science secondary school students with respect to gender (Tella 2007). Highly motivated students performed better academically than lowly motivated students (Tella 2007) and females are highly motivated compared to their male counterparts (Sikwari 2014). Surprisingly, a research conducted by Niebuhr (1995) to examined the effect of motivation on the relationship of school climate, family, environment and students characteristics to academic achievement reveal that, the attitude is often used in conjunction with motivation to achieve is self-concept, or the way one thinks about oneself to perform a task successfully. There is considerable evidence to support the contention that positive academic self-concept contributes to academic achievement by enhancing the motivation to achieve. This study's purpose is to explore student achievement motivation, gender and how these factors impacts learning and academic performance.

How do people differ in their motivation to achieve? In a classic study to assess the differences in strengths of people's achievement motives McClelland cited in Tella (2003) developed a projection technique using selected picture cards from the Thematic Apperception Test (TAT). The technique assumes that, when asked to write stories about the pictures, respondents will project their feelings about themselves onto the characters in the pictures. Assessment of the responses involves noting references to achievement goals (concern over reaching a standard of excellence). Subjects who refer to achievement goals are often rated high in achievement motivation; those who rarely or never refer to achievement goals are rated low (Tella, 2007).

Achievement motivation is often correlated with actual achievement behaviour (Abdullahi, 2015). The motivation to achieve, however may evidence itself only in behaviour that children value. For example, a child may be highly motivated to achieve, and this may be exhibited in athletics but not in schoolwork. Thus, different situations have different achievement attaining values for children (Eccles, Wigfield & Schiefele 1998; Harter & Connell, 1984).

As for the original and development of the achievement motive, it can be safely said that it is conditioned by one's early training, experiences and subsequent learning. In general, children usually acquire the achievement motives from their parents' lifestyle. Studies have shown that the children whose independent training starts at an early age and who get more autonomy within a cooperative, encouraging and less authoritarian family environment usually develop an achievement-oriented attitude. Later on, the experiences and learning based on the circumstances and situations in his life may lead and individual to provide a level for the intensity of his achievement motive to struggle for attaining the standard of excellence desired by him.

Achievement motivation is the attitude to achieve rather than the achievements themselves. It can be considered as extended person-intrinsic motivation because its reinforcement is delayed. It arises from an interaction within the person. Individuals with high achievement motives usually act in ways that will enable them to outperform others, meeting or surpassing some standards of excellence or do something unusual (Cueva, 2006).

Achievement motivation has been regarded as the extent to which individuals differ in their need to strive to attain rewards, such as physical satisfaction, praise from others and feelings of personal mastery (McClelland, 1985). People with high achievement motives will act in ways that will help them to outperform others, meet or surpass some standard of excellence, or do something unique (Schmidt & Frieze, 1997). All students are influenced by a need to achieve to a certain level. Irving Sarnoff as cited in (Mangal, 2013), "Achievement

motive is defined in terms of the way an individual orients himself towards objects or conditions that he does not possess. If he values those objects and conditions, and he feels that he ought to possess them he may be regarded as having an achievement motive."

This study achievement motivation, began with the work of David McClelland. McClelland coined the term *n Ach* denoting need for achievement (McClelland, 1961; McClelland & Winter, 1969). This theory says that under appropriate conditions, people will do what they have been rewarded for doing it. Wiener (1986) has presented the most ambitious attribution theory of achievement motivation and emotions. This theory deals with the perceived causes of success and failure, the characteristics of causal thinking, and subsequent emotional experiences in relation to achievement behaviours. Another important leap in motivational research is goal orientation theory. The basic premise of achievement goal orientation theory (Elliot & McGregor, 2001) is that when students engage in academic tasks, they set various personal goals and the types of goals that students adopt can directly influence their academic outcomes.

Elliot and McGregor's (2001) model of achievement motivation, discuss two broad classes of goals: mastery goals i.e. to "master" the task at hand and performance goals i.e. demonstrating superior performance relative to others. Research indicates that when students adopt mastery goals, they tend to engage in more effective cognitive processing strategies (Noar, Anderman, Zimmerman & Cupp, 2005). Social goals is also another important type of goals, although not examined at length as mastery and performance goals (Dowson & McInerney, 2001). In these goals social reasons are the main concerns for trying to achieve in academics. According to Maehr (2008), achievement motivation is largely social psychological in nature. It often occurs within groups, where interpersonal interactions can undermine or facilitate engagement in the tasks to be done.

The experimental researches carried out by some researchers have tremendously improved the knowledge about the motive to achieve (Gesinde, 2000). Achievement motivation could

be seen as self determination to succeed in whatever activities one engages in, be it academic work, professional work, sporting events. Gesinde (2000) posits that the urge to achieve varies from one individual to the other, while for some individuals need for achievement is very high whereas for others it may be very low. However, there are high achievers and low achievers. What is responsible for the variation could be the fact that achievement motivation is believed to be learnt during socialization processes and learning experiences. As a matter of fact this varies from one individual to the other. Gesinde (2000) asserts further that, those who have high achievers as their models in their early life experience would develop the high need to achieve, while those who have low achievers as their models hardly develop the need to achieve.

2.3.4. Forms of Achievement Motivation

McClelland (1961) identified three basic forms of achievement motivation in his book "The Achieving Society":-

1. Need for achievement (n-Anch)
2. Need for Affiliation (n-Aff)
3. Need for Power (n-Pow)

Need for Achievement (n-Anch): People with a high Need for achievement (n-Anch) seek to excel and thus tend to avoid both low-risk and high-risk situations. Achievers avoid low-risk situations because the easily attained success is not a genuine achievement. In high-risk projects, achievers see the outcome as one of chance rather than one's own effort. High nAch individuals prefer work that has a moderate probability of success, ideally 50% chance.

Achievers need regular feedback in order to monitor the progress of their achievements. They prefer either to work alone or with other high achievers.

Characteristics of Need for Achievement (n-Anch) Individuals

i. They have strong need to set and accomplish challenging goals.
ii. They take calculated risk to accomplish their goals.

iii. Like to receive regular feedback on their progress and achievements.

iv. Often like to work alone.

Need for Affiliation (n-Aff): Those with a high need for affiliation (nAff) need to create close personal relationship with others, need to feel accepted by other people and avoid conflict. They tend to conform to the norms of their work group. High nAff individuals prefer work that provides significant personal interaction. They perform well in customer services and client interactions.

Characteristics of Need for Affiliation (n-Aff) Individuals

i. Want to belong to the group.

ii. Want to be liked, and will often go along with whatever the rest of the group want to do.

iii. Favors collaboration over competition.

iv. Don't like high-risk or uncertainty.

Need for Power (n-Pow): The Need for Power (n-Pow) is the drive to control, be responsible and have authority over others and to influence others. A person's need for power (n-pow) can be one of two types-personal and institutional. Those who need personal power want to direct others, and this need often is perceived as undesirable. Persons who need institutional power (also known as social power) want to organize the efforts of others to further the goals of the organization. Manager with a high need for institutional power tend to be more effective than those with a high need for personal power.

Characteristics of Need for Power (n-Pow) Individuals

i. Want to control and influence others.

ii. Like to win arguments.

iii. Enjoy competitions and winning.

iv. Enjoy status and recognition.

2.3.5. Achievement Motivation in School

"Achievement Motivation" means the "need to achieve". Several theories have been propounded by experts and scholars in management as well as in the field of psychology regarding achievement. In general, achievement theories assume that certain individuals have the potentials and abilities to achieve much more than their counterparts with whom they have similar intellect and capabilities. This potential, however, drives them into hitting their targets faster than such others. It serves as the motivator, thereby making them over-achievers. Abesha (2012) subscribed that "This category of individuals is seen to accomplish task much beyond those normally expected of them. They could be motivated to accomplish even the more through the use of positive reinforcements. Making their achievements and those of the entire organization known to them is a positive more towards more goal achievement".

Given a free choice situation, that is, one in which the individual can select any available alternative individuals who are classified as high in achievement-oriented actions while those considered low in this motivational constellation tend to avoid such activities, the high motive group also is predisposed to arrange the environment so as to increase the likelihood of success at achievement oriented activities. It has been reasoned that for the low motive group some other source of motivation (e.g. money or social needs) is necessary before they will undertake achievement related activities. "Achievement motivated student will persist longer at a task than with students who are less high in achievement motivation and will attribute their failures to lack of effect (an internal but alterable condition) rather than to external factors such as task difficulty or luck. In short achievement motivated students want and expect to succeed; when they fail, they redouble their efforts until they do succeed" (Weiner, 1992).

It is paramount to add that teachers often have an implicit motivational scheme concerning how to obtain maximum performance from their students. Some believe in "Scare"

techniques, i.e. issuing low grades in the early part of their course. Others believe in positive reward course. Others believe in the 'positive reward' and dispense an abundance of praise. Indeed, the history of research in achievement motivation clearly demonstrates that individual differences interact with environmental determinants to affect performance (Weiner, 1973). Heider cited in (Weiner, 1973), made a distinction between "can" (ability) and "try" (motivation); success as an achievement action could be attributed to special ability or unusual effort (or, at times to some external factor such as luck). Similarly, failure could be attributed to lack of ability or effort.

In a research conducted by Weiner and Kukla (1970), on College Students aimed at reward and punishment a hypothetical group of elementary school pupils who have just completed examination, three factors were conveyed to the subjects. The pupil's ability (Yes or No) or their exam performance (Excellent, Good, Borderline, Moderate Failure or Clear Failure). The result of the findings showed that ability, motivation, and outcome, significantly influence reward and punishment. The study equally revealed that ability and motivation acted in diverse directions; that is low ability and high motivation increase performance evaluation. It is clear to state that systematic relationships exist between individual differences and achievement related needs perception responsibility and self-reward for goal attainment.

Ahmad and Rana (2012), stated that McClelland (1961), made an attribution analysis of achievement motivation, which leads to the following suppositions:

1. Individual high motivations are more likely to approach achievement-related activities than those with low in motivational disposition because they tend to ascribe success to themselves and hence experience greater reward for goal attainment.
2. Individual high in achievement motivation persist longer given failure than those low in this motivational tendency because they are more likely to ascribe the failure to lack of effort, and less likely to attribute failure to deficiency in ability.

3. Individual high in achievement motivation choose tasks of intermediate difficulty with greater frequency than individuals low in achievement motivation because performance at those tasks is more likely to yield information about one's capabilities than selection of tasks which are very easy or extremely difficult.

Abesha (2012), have shown that colleges differ markedly in their students' perceptions of what are important goals and appropriate instrumental behaviours to attain these goals. That is an interaction between students; own motives and skills influence their perceptions of the important cues in the college environment may seem to present compelling cues for expectation of satisfaction from academic achievement and the use of skills in studying while others in the some college perceive cues to expectation of satisfaction from extracurricular leadership achieved by using skills in making friends and fulfilment of social obligation.

It is discovered that certain types of fantasies viz, those concerned with doing well or improving performance, most accurately reflected increases in achievement motivation. McClelland & Winter (1969) cited in Shekhar (2012) noted that there is reason to believe that achievement motivation is less likely to lead to superior performance in the school situation than in an entrepreneurial one, for the simple reason that many schools tasks are not "challenging". In fact to do better, it conscientiously exactly what the teacher ask you to do.

The work of Decharms (1972) in St. Louis has proved that practicing some simple motivational exercises which the teachers had been trained to introduce helped the disadvantaged children to gain about half a grade in academic skills after achievement motivation training over those who had not received the special training.

McClelland & Winter (1969), identified some twelve different educational inputs that could conceivably help develop achievement motivation as summarized under four major headings:

Achievement Syndrome.

Self-Study.

Goal-Setting.

Interpersonal Support.

The Howard group has identified factors that influenced the effectiveness of achievement motivation training on school children as follows:

Age & Maturity.

Sex.

Subject-Matter.

Classroom Structure.

It seems entirely possible achievement motivation training is effective in the classroom without affecting much the level of achievement motivation in the students. Nevertheless, it helps teachers to improve their classroom management techniques; improve school learning by getting more attention, participation and accountability from the students. On the part students, it teaches them to manage their lives better, just as it taught the teachers how to manage their classroom.

2.3.6. How to Develop Achievement Motivation

Development of achievement motive is affected by a number of variables within the home, school, and society. Home play an important role in the early training of children for the development of attitudes and motives. The society and its philosophy is an important variable in developing achievement motive. There are communities which are achievement-oriented. There are others that believe in fate and leave everything to Allah. The child normally enters the school at the age of five (5) years. Before coming to school, he has gathered many experiences which become an integral part of his personality and after which the school can help a lot to sharpen already-acquired experiences and develop positive attitudes in children. . According (Haruna, 2016), the teacher can play a very crucial role in the development of achievement motivation by the following methods:

1. The teacher should make clear the importance of achievement motivation in life by means of telling the stories of great peoples and their achievement from all walks of life. When the

students are convinced in advance to believe that they would or should develop achievement motivation, the efforts of the teacher will succeed.

2. The teacher should provide a proper environment both inside and outside the class. The teacher's attitude and enthusiasm will create better environment for achievement motivation in students.

3. The teacher will succeed in his attempt if he convinces the students that developing a new motive is realistic and reasonable.

4. The teacher should relate the motive with future life of the students and assign independent responsibility to them.

5. The teacher should make clear to the students that new motive will improve their self-image.

6. The teacher should emphasize upon the fact that new motive is an improvement on prevailing cultural values.

7. The teacher should make students committed to achieving concrete goals in life related to the newly developed motive.

8. The teacher should ask the students to keep the record of their progress towards their goals.

9. Self-study should be emphasized.

10. The teacher should make an effort to develop conducive social climate in the class so that every individual should feel that he belongs to a group.

2.3.7. Measurement of Achievement Motivation

One of the known theory major achievement motivation is the McClelland theory of achievement motivation and the other supporter theorized that once fantasies determine the exploration and measurement of achievement motivation. He tried to collect information from subjects by means of projective technique's creative production. He used T.A.T (Thematic Apperception Test) pictures to collect data or information on the fantasies of the

subject. The assumption underlying T.A.T pictures is that, when he present a picture to another person in a social setting under ambiguous and unstructured circumstances and ask him to tell a story about what is happening in the picture, in doing so he (subject) may often reveal much about himself. McClelland and his associates made qualitative and quantitative studies of T.A.T stories written by their subjects. The results as reported by them were positive. The technique is reliable and a promising development in the field of measuring motivation. The most significant contribution of McClelland and associates is that they advocated that motives develop out of affective arousal theory (Kaushik & Rani, 2005).

The research conducted by them on achievement motivation throws new light on human behaviour and continual strivings for perfection, goal work and high achievement. Changes in religious beliefs, personal and social values and orientation towards achievement may result in high achievement motivation. Parental expectations are indeed directly related to the level of achievement motivation in their sons and daughters. Furthermore, the Thematic Apperception Test (T.A.T), developed by Henry Murray in 1935, is another projective test that is widely used in both clinical work and studies of motivation (Ahmad & Rana, 2012). This T.A.T consists of a series of pictures of ambiguous social encounters. Usually, the person being tested is shown as many as twenty pictures, chosen for their appropriateness to his or her age and sex. The person tells a story about each picture, including what led to the scene, what the characters are thinking and feeling and how the scene ends (Singh, 2011).

In analyzing a subject's T.A.T responses, the examiner first determines the character, usually the stories central figure, on which the subject has apparently projected aspects of him or herself. Other characters in the story taught to reflect traits of people who are important in the subjects' life.

Murray originally suggested that responses be analyzed for both the subject's psychological needs (including the needs for achievement, affiliation, aggression,

dependency, nurturance, power & sex) and environmental factors that might be helping or hindering fulfilment of those needs. For instance, if the central character of a person's stories is striving hard for success, but is constantly thwarted by the lack of social connections, the examiner presumes need for achievement and a concern over obstacles related to social status. The T.A.T, even though criticized as too open-ended and too reliant on the examiner's interpretive skill, it is still being used in a variety of clinical and research contexts to assess underlying motivations that respondents may not be able to express directly (Tella 2007). In one study, for example, the T.A.T was used to assess respondents' feelings or ambivalence towards their same sex siblings (Awad, 2004).

Other methods of measuring human motivation are:

1. Experimental Method

Experiments have been conducted in the laboratory, initially on animals, and then were carried over to conduct experiments on human beings. In these experiment, human beings are deprived of food or water for a specified period and the strength of the hunger or thirst drive is measured.

2. Self-Rating Technique

The simplest and the oldest technique of measuring human motives is self-rating. In this technique two (2) procedures can be used.

(a) Direct Procedure: The subject is asked to fill questionnaire or rating scale.

(b) Indirect Procedure: The subject is asked to indicate his likes or dislikes for a variety of activities ranging from objects to values. On the basis of the analysis of his responses of likes and dislikes, the strength of his motives is determined.

3. Rating of Motivation by Outside Observers: Self-reporting techniques using direct or indirect methods of collecting information on human motivation have not been found reliable. They have been replaced by rating techniques in which motives are rated by

observers. This techniques is most useful in exploring unconscious motives of the subject himself is not aware.

4. Behavioural Measures of Motivation: in behavioural measuring technique of motivation we try to detect the presence of motives by observing in the responses of the person under some conditions. Physiological responses, learning, perception, coping behavior, expression and perceptual behavior may provide information of the motives of persons.

5. Method of Story-Telling: Being dissatisfied with direct measures of motivation, story-telling techniques was developed in 1948. This method was developed by McClelland and associates. It has been used in most of the studies on motivation in which the subject asked to formulate a story on a picture (TAT) as elaborately as he can. The underlying assumption is that the subject will project his unconscious motives in the story. It is assumed that the individual interprets test figure on the basis of his inner structure and indirectly gives the information of his motives and their strength.

2.4. Academic Performance

2.4.1. Concept of Academic Performance

Academic performance is the outcome of education or an instruction- the extent to which a student, teacher or instruction has achieved their educational goals (Audu, 2015). There are two traditional indicators of academic performance, namely grades and highest level of educational attainment. These two indicators are arguably the most important to educator, students, their parents, and those people who make public policy decision.

Academic performance is the performance in academic subjects or the performance in a particular course by academic achievement; we mean the performance of a learner after course of instructions and measure in terms of masks and grades obtained in a given area of knowledge or skills acquired after undergoing a program of instruction. According to Ahmad & Rana (2012). “Academic performance is the knowledge attained or skill developed in the school subjects usually designed by test scores are makes assigned by Teacher, or both”.

Academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important – procedural knowledge such as skills or declarative knowledge such as facts. (Abdullahi, 2015). In some institutions, the performance of schools is measured by the Academic Performance Index. At school, students engage in extensive peer interactions, aggression is a salient issue because it may inflict harm on others and undermine group functioning (Dodge, Coie, & Lynam, 2006).

The educational psychology literature decisively indicates that the psychological variables have an important role in academic performance (Ackerman, Chamorro-Premuzic, & Furnham, 2010). Recent studies on school children (Deary, Strand, Smith, & Fernandes, 2007) and university students (Rohde & Thompson, 2007) have confirmed this.

Some psychological factors play an important role to promote or decline academic performance, such as achievement motivation. So, it is very important to recognize that and use them to improve the academic performance of students. Pass marks are academic achievement, marks that are pre-set to be the level of which students are presumed successful and below which they are pronounced failures.

Academic performance are classified as good or poor depending on the following factors among others.

a. General performance in test.
b. Difficulty level of the test.
c. Abilities of the students involved.
d. Marking style of the teacher and so on.

According to Bakare, McInerney & Dowson (2003) factors responsible for academic success and failure includes, intellectual and non-intellectual correlates. This includes governments, society, school, family and individual related variables. Ackerman, Chamorro-Premuzic & Furnham (2010) stated that psycho-social variables are also factors which initiates against

academic success if not properly handled. Abdullahi (2015) added that a poor study habit; lack of vocational goals, socio-economic status and test anxiety can cause poor academic performance. Abesha (2012) puts it that, directly or indirectly, every day classroom interactions promote particular learning situations through his choice of objective, organization of experience and selection of materials and methods in order to facilitate the student's academic performance. From the above, one can deduce that academic performance is the yardstick with which the students' academic ability can be measured, assessed or observed.

2.4.2. Determination of Performance in School Work

Research carried out in Britain in the 1960's (Flude, 1974) as cited in Sikhwari (2014) revealed that children from middle class homes were more likely to succeed at school because of their home background and primary socialization generally equip them with those cognitive and linguistic skills together with those values attitudes and aspirations that were consonant with the demand of formal education. In contrast, Flude further argued that children from working class home, particularly those whose fathers were employed in unskilled or semi-skilled occupations were thought to lack those attributes that were taken to explain the educational success of middle class children. This account carried considerable weight when differences were revealed in educational attainment of pupils with similar measured abilities but from different social class or home background. Evidence shows that the validity of independent variable and by implications as an explanation of the problem.

Russell (1975) as cited in Tella (2007) argued that the child whose memories are associated with resentment could not be expected to compare successfully with those whose memories are associated with a feeling of what we called personal satisfaction or a sense of achievement. Douglass (1967) as cited in Shekhar & Devis (2012), in a study of Welsh, English and Scottish children, found out that even within the narrow span of years, between 8 and 11, measured performance respond to environmental factors, as he termed them and

which include conditions of the home and degree of parental encouragement. But he added that the relevance of these factors differ with social class and the age of children.

Family size has been shown to affect the performance of children in schoolwork such as housing conditions. Performance declines with increase in completed family size. Also, children with unsatisfactory housing conditions make middle-class children get over these as they grow older; working class children fall even further behind. The strength of Douglas's findings lies in the fact when considering the relation between environmental and educational contrary to this finding, Shekhar & Devis (2012) found that the male students did better than the females' students in academic performance.

2.4.3. Relationship between Achievement Motivation and Academic Performance

In a research comprising several field studies and laboratory experiments, Baggiano (1992) revealed that achievement motivation positively influenced academic performance. It was found that motivational orientation predicted children's standardized achievement scores (Baggiano 1992). Children with an intrinsic motivation orientation had higher reading and math scores and higher overall achievement scores compared to their extrinsic counterparts (Baggiano 1992). There is a significant correlation between academic performances of tertiary institution students with respect to gender (Tella, 2007). Highly motivated students performed better academically than lowly motivated students (Tella, 2007) and females are highly motivated compared to their males' counterparts (Sikwari, 2014). Surprisingly, a research conducted by Neibuhr (1995) to examined relationship between several variables and student's academic achievement, found no significant effect on the relationship with academic achievement. Niebuhr (1995) cited in Mohammed (2016), suggested that the elements of both school climate and family environment have a stronger direct impact on academic performance.

Onete, Edet, Udey and Ogbor (2012) examined the relationship between first year education students' achievement motivation and their academic performance. They indicated

that neither students' academic performance motivation nor students' social achievement motivation had any significant influence on education student's academic performance.

Tella (2007) showed that gender difference was significant when impact of motivation on academic performance was compared in male and female students in Nigeria.

According to several researches, school achievement is highly related to general intelligence, with explains about 25% of the variance in scholastic achievement (e.g. Kuncel, Hezlett, Ones 2004 cited in Singh, 2011). Other construct that might add to the explained variance is motivation. Research analyzing the relation between need for achievement and school performance was conducted by Smith (2011), who looked for different motivational constructs, inter aliened for achievement, influencing school achievement. The authors examined German children from school preparing for university. Achievement motives were measured with two different methods: the Achievement Motive Scale, based on McClelland's conception, and the need for achievement scale of the Personality Research Form, referring to Murray's view on need for achievement. The indicators of school performance were measured by achievement in two specific domains (Math and German) and general school achievement. Results of conducted hierarchical regression and relative weights analyses proved the general importance of motivation, there in achievement motivation, in school context. According to this research, motivation constructs nearly explained as much unique variance in general school performance as intelligence (Steinmayr & Spinath, 2009). Similarly, positive relationship between achievement motivation and school performance was found by Meijer and Wittenberg. The authors analyzed the joint influence of sleeping time, intelligence, eagerness and achievement motivation on school performance in the last two grade of elementary school.

Results of the study showed that less chronic sleep reduction, greater eagerness, higher achievement motivation and intelligence rise a better school performance. According to the authors, those variables explain together 43% of the variance in school performance. The

correlation between academic performance and motivation, therein achievement motivation, was also analyzed with reference to students. Research showed that the need for achievement is a valid factor of students' commitment and positively correlates with academic performance. According to the research review, the achievement motivation plays an important role in predicting students' future success or failure. Therefore, it is crucial to put special emphasis on forming high level of students' need for achievement through special training programmes.

Educational expectations, that is, student's own expectations about the highest level of education they will attain, represent a kind of expectation about future academic success. According to expectancy-value theory (Eccles, 1995, Eccles & Wigfield, 2002), expectations of success are a crucial component influencing achievement related performance and are assumed to be influence by perceptions of competence and by goals held by individuals. Such perceptions and goals are influenced by individuals' interpretations of their own previous achievements. In other words, expectations of success and outcomes of achievements presumably have a cyclical influence on each other. That is, individuals' expectations of success influence their achievements and their achievement further influence their future expectations. Consistent with the feedback mechanism of the expectancy-value model, adolescents are expected to have better long-term academic achievement outcomes if they have higher educational expectations during earlier periods. Through feedback mechanism operating over time, educational expectations are assumed to facilitate academic performance.

2.5.Theoretical Framework:

2.5.1. McClelland's Achievement Motivation Theory

The theoretical framework for this study was rooted in McClelland's Achievement Motivation Theory. "Achievement Motivation Theory attempts to explain and predict behavior and performance based on a person's need for achievement, power, and affiliation" (Lussier & Achua, 2007). The Achievement Motivation Theory is also referred to as the Acquired Needs Theory or the Learned Needs Theory. Daft (2008) defined the Acquired Needs Theory as "McClelland's theory that proposes that certain types of needs (achievement, affiliation, power) are acquired during an individual's lifetime".

The Achievement Motivation Theory evolved from work McClelland began in the 1940s. In 1958 McClelland described human motives in the Methods of Measuring Human Motivation chapter of Atkinson's book, *Motives in Fantasy, Action, and Society*. At that point, McClelland identified human motives related to the achievement motive, the affiliation motive, the sexual motive, and the power motive. In his later work, *The Achieving Society* (McClelland, 1961) cited in Ali and Musa (2012), however, McClelland focused his attention on only need for Achievement, the need for Affiliation, and the need for Power. In essence, McClelland's theory postulates that people are motivated in varying degrees by their need for Achievement, need for Power, and need for Affiliation and that these needs are acquired, or learned, during an individual's lifetime (Daft, 2008; Lussier & Achua, 2007). In other words, most people possess and will exhibit a combination of three needs.

2.5.1.1 Need for Achievement

McClelland, Atkinson, Clark, and Lowell (1958) cited in Mohammed (2016) defined the need for Achievement (*n* Achievement) as "success in competition with some standard of excellence. That is, the goal of some individual in the story is to be successful in terms of competition with some standard of excellence. The individual may fail to achieve this goal, but the concern over competition with a standard of excellence still enables one to identify

the goal sought as an achievement goal. This, then, is our generic definition of "*n* Achievement".

McClelland et al. (1958) went on to describe that competition with a standard of excellence was most notable when an individual was in direct competition with someone else but that it can also be evident in the concern for how well one individual performs a task, regardless of how someone else is doing. According to Lussier and Achua (2007), "the need for achievement is the unconscious concern for excellence in accomplishments through individual efforts". Similarly, Daft (2008) stated the need for Achievement is "the desire to accomplish something difficult, attain a high standard of success, master complex tasks, and surpass others". Individuals who exhibit the need for Achievement seek to accomplish realistic but challenging goals.

2.5.1.2. Need for Power

McClelland (1961) defined the need for Power as a "concern 'with the control of the means of influencing a person'". Lussier and Achua (2007) defined the need for Power as "the unconscious concern for influencing others and seeking positions of authority". Similarly, Daft (2008) defined the need for Power as "the desire to influence or control others, be responsible for others, and have authority over others". Individuals who exhibit the need for Power have a desire to be influential and want to make an impact.

2.5.1.2. Need for Affiliation

When defining the need for Affiliation, McClelland (1961) stated, "Affiliation establishing, maintaining, or restoring a positive affective relationship with another person. This relationship is most adequately described by the word friendship". Therefore, "the need for affiliation is the unconscious concern for developing, maintaining, and restoring close personal relationships" (Lussier & Achua, 2007). Daft (2008) defined the need for Affiliation as "the desire to form close personal relationships, avoid conflict, and establish warm friendships". Individuals who exhibit the need for Affiliation are seeking interactions with

other people. The McClelland theory of achievement motivation is relevant to one of the major variable of the research, specifically the need for achievement for an individual to excel academically.

Motivation, as it relates to students, is very important. Students who have high motivation to achieve generally do well academically. Students with low motivation do not do well academically, but motivation does not guarantee performance. Similarly, performance does not reflect motivation (Keefe & Jenkins, 1993).

2.5.2. Sigmund Freud Psychoanalytic Theory of Motivation

The psychoanalytic theory of motivation of Sigmund Freud focuses on unconscious drives and instincts as causes of behaviour. The theory has given us familiars concepts such as id, ego and superego. Freud's psychoanalytic theory of motivation centered on his concepts of instincts and conscious. Freud (1953), maintained that instincts are the root-cause of all activities in human beings. He identified two basic instincts for this purpose in his book "an Outline of Psycho-analysis (1953)" he asserted that 'eros' the life or erotic instinct, and the death instinct or the desire to destroy, even to the extent of destroying oneself, are the ultimate sources of motivation.

An individual can be motivated by any or a combination of any of the following motives:

1. **Biological Motives:** These are all kinds of motives and instinct necessary for the survival of the human organism. They are often associated with bodily needs such as the need for food, oxygen, water and sex.
2. **Social Motives:** Social motives are the innate tendencies in human beings to associate and learn from each other in the social environment. They have a biological basis but serve social needs. Culture and group philosophies influence these motives. Social motives and drives include those that motivate people for prestige, dependency, approval, respect, status and self-esteem.

3. **Personal Motives:** These concern those needs that affect the personality of the individual. This motive motivates a person to set goals, have values and acquire certain attitudes and self-identity.
4. **Ego-Integrative:** These include self-respect that is concern about what happens to oneself. Ego-integrative motive lead to the development of skills. Other motives in this category include the desire for prestige, power, self-actualization, self-fulfillment and achievement.

Psychoanalytic theory posited different processes to explain gender development in boys and girls. Initially, both boys and girls are believed to identify with their mothers. However, between 3 to 5 years of age this changes and children identify with the same-sex parent. Identification with the same-sex parent is presumed to resolve the conflict children experience as a result of erotic attachment to the opposite-sex parent and jealousy toward the same-sex parent. This attachment causes children much anxiety as they fear retaliation from the same-sex parent. The lack of a visible genitalia in girls fuels boys' castration anxieties. Girls face a more complex situation. They feel resentment over being deprived of a penis, inferior, and fear retaliation from the mother for their designs on their father. The conflicting relationship is resolved through identification with the same-sex parent.

The process of identification is depicted as one in which children undertake wholesale adoption of the characteristics and qualities of the same-sex parent. Through this process of identification, children become sex-typed. Identification with the same-sex parent is stronger for boys than girls, boys are expected to be more strongly sex-typed.

Although psychoanalytic theory has had a pervasive early influence in developmental psychology, there is little empirical evidence to support it. A clear relationship between identification with the same-sex parent and gender-role adoption has never been empirically verified (Hetherington, 1967, Kagan, 1964, Payne & Mussen, 1956) cited in Mohammed (2016). Children are more likely to model their behaviour after nurturing models or socially

powerful ones than after threatening models with whom they have a rivalrous relationship (Bandura, Ross, & Ross, 1963).

In the classroom situation, teachers must understand that some behaviours are caused by innate motives, drives and instincts either consciously or unconsciously. Therefore, they have to make provisions in their learning experiences to meet these needs. For example, the behaviour motivated by biological needs for food can be taken care of by making sure that student are well fed. School lunch or lunch breaks can be introduced to help students feed adequately during the school period. Adequate ventilation can take care of need for oxygen, while sex education can provide information for satisfying the sex drive. Social and personal as well as ego-integrative motive can be met through recognition, approval, assigning responsibilities and ensuring success.

In an attempt to explore achievement motivation of Science Senior Secondary School in Kano State, Sigmund Freud suggestion on what motives one can serve yardstick that motivates students at Science Senior Secondary School to have positive academic performance. For instance, the social and personal motivation can enhance the effort of the learner to achieve in their academic activities. Whereas, ego-integrative and biological motive guide learner to work hard in other to earn the desire prestige, power, self-fulfilment in the academic activities.

2.5.3. Maslow's Theory of Motivation (Humanistic Theory)

Maslow (1954), believe that human being have certain inborn needs which they strive to fulfil. He describes human needs in biological terms. To Maslow, every need arises from an in balance or disequilibrium between what human nature deems necessary for the health of a person, and what a person's environment provides. When environment provides people with what they need **homeostasis or equilibrium** occurs. Maslow proposes five types of human needs in a hierarchy which reflects the sequence in which needs must be fulfilled. Maslow's hierarchy needs, summarized in the figure below, has been utilized as the basic motivational

framework for a number of generalized consideration of human functioning such as mental health, general adjustment, classroom dynamics and mental behaviour.

Fig. 2.1 Maslow's Hierarchy of needs. Ordering motivational needs



Source: Oladele, J. O. (1989)

Maslow's believes that lower order needs must first be satisfied (fulfilled) before the higher order needs can be met. For example, physiological needs must be satisfied before safety needs, safety needs before love needs. By the same token, a person cannot begin to approach satisfaction of self-esteem and self-actualization needs until he feel personally well-fed, safe and loved. The lower level needs are more typically met through the responsibility of the family. Families are the source of physiological need fulfilment. Safety needs are also met largely through the security offered at home are love and belonging needs.

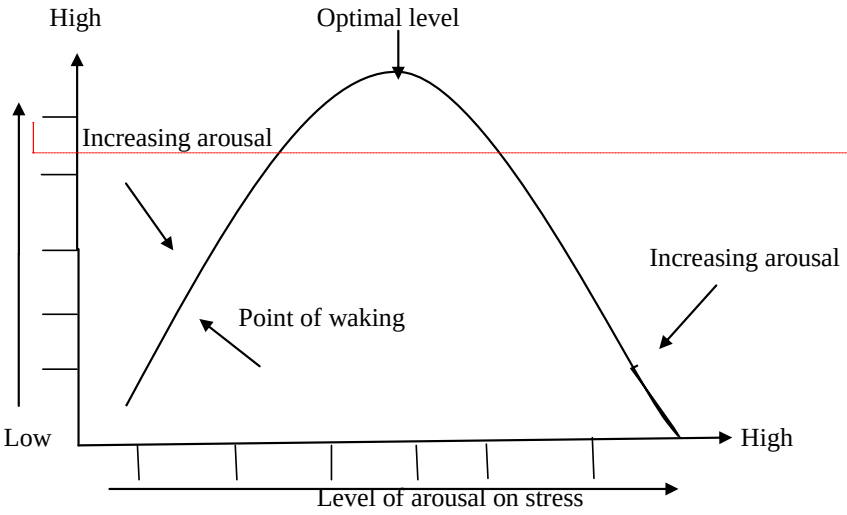
Maslow theory of hierarchy of needs based on the research's understanding contain some element that determine the achievement of the learner. For instance, the need for the learner

to meet up with all the needs outlined by Maslow's can motivate the learner to vigorously work hard to have positive academic performance. Thus, the student regardless of as gender tend to aspire higher to actualized physiological needs, safety needs, love and belonging needs, self-esteem and self-actualization needs

2.5.4. Yerkes & Dodson Theory (1908) Arousal and Performance

Arousal is a major aspect of many learning theories and is closely related to other concepts such as anxiety, attention, agitation, stress and motivation. The arousal level can be thought of as how much capacity you have available to work with one task respect to arousal is the "Yerkes Dodson Law/ named after the researchers who discovered it" which predicts an inverted U-Shaped function between arousal and performance (Yerkes & Dodson, 1908).

Fig. 2.2. Yerkes & Dodson Theory Arousal and Performance



Source: Mateo, J. M. (2007),

A certain amount of arousal can be a motivator toward change (with change in this discussion being learning), but too much or too little will work against the learner. You want some mid-level point of arousal that provides the motivation to change. Too little arousal has an inert effect on the learners, while too much has a hyper affect.

Comment [Y1]: Efficiency of memory

Comment [Y2R1]:

There has been quite a bit of research indicating the correlation suggested by Yerkes & Dodson exists (Broadhurst, 1957, Duffy, 1957, Anderson, 2000), but a cause of the correlation has not yet been fully established (Anderson, Revelle & Lynch, 1989). Although the Yerkes -Dodson law is quite old, it has held up in time through numerous studies just because something is old, does not make it invalid. In fact, because it has held up for so long it has gone from theory to law.

There are optimal level of arousal for each task to be learned:

- Lower for more difficult.
- Intellectually (cognitive) tasks.
- Higher of tasks requiring endurance and persistence.

This theory posits that individuals sometimes seek to increase their level of tension, inquisitiveness or arousal, while at other times they wish to decrease arousal. In other words, a person seems to reach a preferred or optimal level of arousal that is neither too high nor too low. For instance, if a learner is in a low state of arousal, such as very tired or hungry, learning is likely to be impaired because of insufficient attention to the learning task. However, a very high level of arousal, such as extreme anxiety and nervousness will also interfere with performance because the individual has difficulty in concentrating on a particular task.

2.5.5. Atkinson's Theory of Intrinsic Motivation (1964)

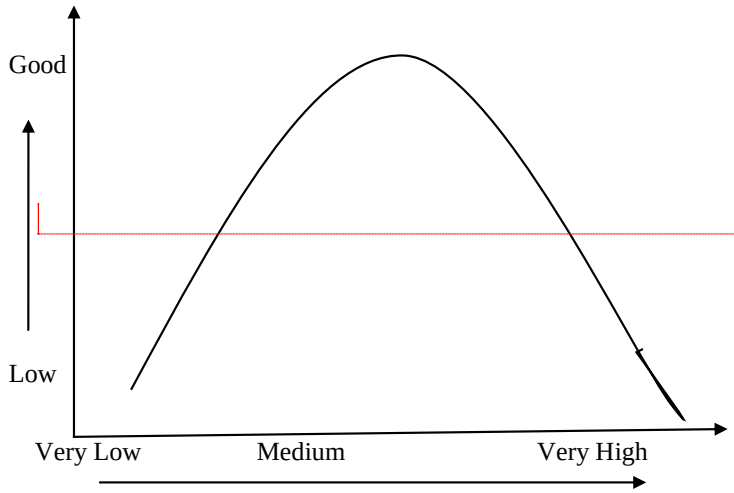
Comment [Y3]:

Atkinson's believed that when an individual is confronted with a problem, two (2) basic factors come into play. The first is the probability of success; and the second is the incentive associated with success in the task. Theoretically these two factors are interrelated and it can be hypothesized that the lower the probability of success, the higher the incentive and the higher the probability of success, the lower the incentive. The proposition implies that a difficult task whose probability of success is low will stimulate higher incentive to succeed than another whose probability of success is high. Careers like medicine, engineering or

computer science demand a high level of abstract intelligence and skills and so have low probability of success but are associated with high incentives, such as high salary, status.

On the other hand, jobs like manual laundry and house-cleaning that require very relatively low abstract intelligence and complex skills are associated with low incentives. This is why Atkinson posited that individuals' tendency to succeed in a task is proportional to each of these factors. This proposition can be presented diagrammatically thus:

Fig.2.3 Level of Motivation and Performance

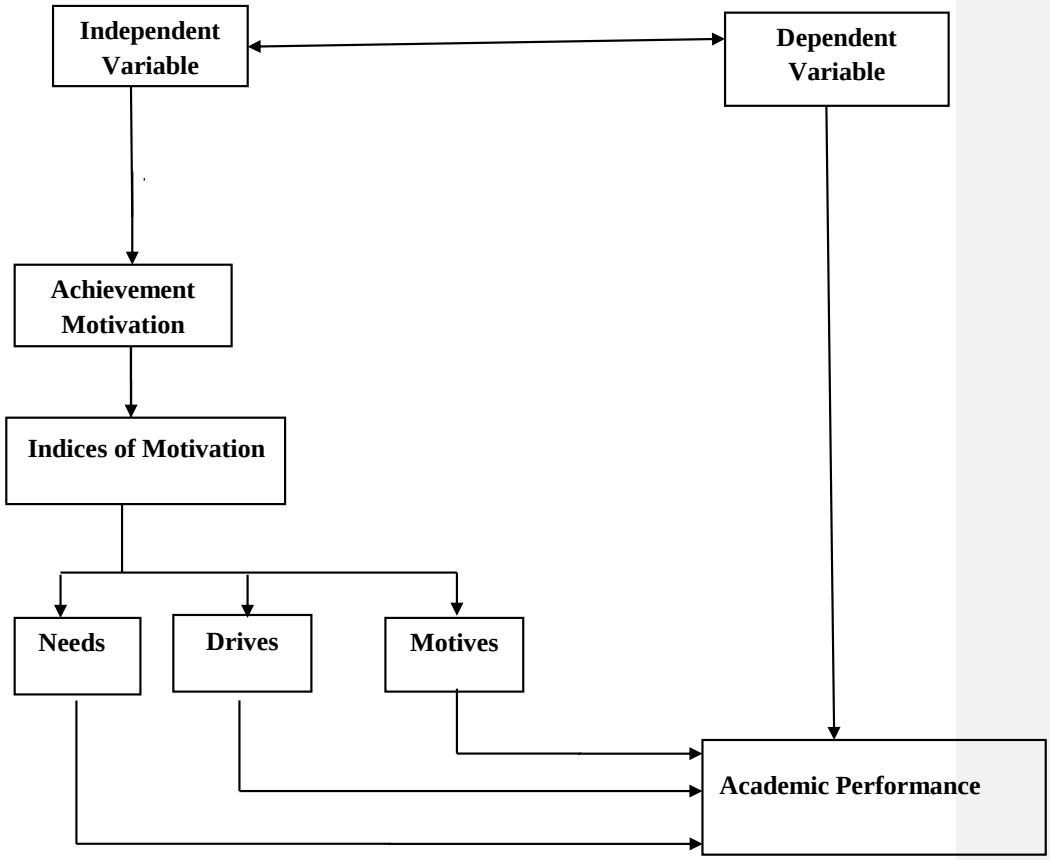


Source: www.neurobio.learn.mem.com retrieved 31 October, 2017

Comment [Y4]: Performance
Efficiency of memory

Comment [Y5R4]:

Fig. 2.4. Conceptual Framework Variables



Source: Constructed by the researcher

Diagram illustrates the network of the conceptual relationship of the variables. To begin with independent variable then dependent variable, Needs, Drives and Motives employed in this study to determine academic performance of science senior secondary school students in Kano State, Nigeria.

2.6. Review of Empirical Studies

Tella (2007) conducted a study that investigated the impact of motivation on students' school academic achievement in Mathematics in Secondary Schools using motivation for academic preference scale ($r = 0.82$; $P<0.05$). Two hypotheses were tested using t-test analysis of variance (ANOVA). The results showed that gender difference were significant when impact of motivation on academic achievement was compared in male and female students. Also other result indicates significant difference when extent of motivation was taken as variable of interest on academic achievement in Mathematics based on the degree of their motivation.

Chetri (2014) carried out a study on achievement motivation of adolescent and its relationship with academic achievement. The sample of this study consisted of 480 secondary school leavers studying in different schools of Sikkim by using stratified random sampling techniques from various governments and private schools. The finding of the revealed non-significant difference in achievement motivation with regard to gender. The relationship between achievement motivation and academic achievement also yielded a significant relationship at ($r = 0.01$; $P<0.05$).

Badola (2013) carried a study on effect of school's on academic achievement motivation of secondary level students. The study was carried out from Pauris and Tehui Garhwal (Utlarakhand State). The data was collected on the basis of academic achievement motivation test (AAMT) developed and standardized. Analysis of variance (ANOVA) showed that, there was significant difference among Government, Public and Convent secondary school students on their academic achievement motivation. Insignificant difference was found between public and convent secondary school students in the academic achievement motivation.

Affum- Osei, Barnie, Eric and Forkuoh (2014) study was carried out to investigate the relationship between achievement motivation, academic self-concept and academic

achievement of high school students. A total of 120 students selected from four (4) school participated in the study. The design for the study was descriptive survey. They reported that, majority of the high school students were highly motivated, have high self-concept and performed well on the mathematics achievement test. The study also found a significant correlation between self-concept and academic achievement. Again, there was a positive relationship between achievement motivation and academic achievement but the correlation was not significant.

Edet, Onete, Peter and Udey (2012) examined academic performance: A function of achievement motivation among education students of Cross River University of Technology, Calabar. The design employed for the study was survey (Expo-facto). A total of 750 out of 1,352 students of the 2010/2011 academic session were randomly selected for the study. To guide the study, two (2) hypotheses were raised. The results of the analysis of the hypotheses indicated that neither student's academic achievement motivation nor students' social achievement motivation had any significant influence on education students' academic performance.

Ali and Musa (2012) study the relationship between achievement motivation and academic achievement for secondary school students at Salt in Jordan. The study sample included 441 students (210 males & 231 females). The study found that student's achievement motivation was high with regard to the major dimensions taken by this study; which are students' having a goal to achieve and persistence. On the other hand, result revealed students' motivation towards the dimension of "ambition" was weak. Result further showed that there were significant differences in students' achievement motivation due to academic achievement; students who passed showed more motivation rather than students who failed. Also. Result showed there were no significant differences in students' achievement motivation due to sex.

Turner, Megan and Robert (2009) examine, the influence of parenting styles, achievement motivation and self-efficacy on academic performance in college students. A population of

264 college students was selected for the study. The design for the study was correlation. Results indicated that authoritative parenting styles continues to influence the academic performance of the college students, and both intrinsic motivation and self-efficacy predicted academic performance.

Shkullaku's (2013) this study explored gender differences in self-efficacy and academic performance among Albanian students from two (2) major Universities in Tirana, Albanian. The data was collected from 180 students (102 females and 78 males) selected from 1st, 2nd and 3rd level students. Both universities and participants were selected randomly. The data was analysed using descriptive and inferential statistics. The Pearson correlation coefficient was used to see the relationship between self-efficacy and academic performance. t-test was used to compare male and female participants in self-efficacy and academic performance. The finding of the study revealed that there was a significant difference between males and females in self-efficacy. There was no differences between males and females in academic performance. Also, a significant relationship was found between the students' of self-efficacy and academics performance.

Sayid and Milad (2011) study examined gender differences in factors affecting academics performance of high school students. Sample of 363 students was selected from the high school students in the 1st, 2nd and 3rd academic year. Survey method was used for the study. Results suggest that differences exist in the cognitive- motivational functioning of boys and girls in the academic environment with the girls have a more adaptive approach to learning tasks.

Maheswari and Aruna (2016) examined gender difference and achievement motivation among adolescent school students. Descriptive research method was used for the study. There were totally 128 students who constituted the universe of the study. The major findings of this study revealed that a little more than half of the respondents (55.5%) were having low-level of achievement motivation and the remaining respondents (44.5%) having high-level of

achievement motivation. “Z” test was applied and it is inferred that there is significant difference between gender of the respondents with regard their to achievement motivation; the calculated “Z” value= 2-314 ($P<0.05$) is higher than the table value, so the research hypotheses is accepted and the null hypotheses is rejected.

Adams and Durowoju (2011) examined relationship between motivation and students’ achievement, as well as male and female student’s cognitive achievement in secondary school Economic in Ibadan Local Govt. Council Area of Oyo State. A population of 200 subjects was selected for the study. The design for the study was survey (ex-post facto). Results showed that motivation is positively related with students’ cognitive achievement. Likewise, gender also has no significant effects on students’ cognitive achievement on Economic. The result also showed that there was no significant difference in the cognitive achievement in Economic on gender basis.

2.7. Summary

There is little or no dispute concerning the role motivation plays in improving the academic and work performance or achievement of students. Everybody, either young or old, perspective of indices of motivation, socio-cultural background and race response to love, affection, recognition, encouragement and affirmation of the right attitude. Everyone require to be help to set their goals and motivated to be an achiever in life especially science secondary school students. However, this chapter has presented a review of some related literature published which give the researcher an insight into the claims and findings of fellow researchers, authority, scholars and writers.

Furthermore, the concept achievement motivation is also defined as the extent to which individuals differ in their need to strive to attain rewards, such as physical satisfaction, praise from others and feelings of personal mastery. Academic performance as one of the key variable is defined as the attainment obtained by a child or student from the lesson taught which may include experiences, knowledge and skills. It is therefore, safe to conclude that

achievement motivation (desire to succeed) is positively related to school achievement, it also clearly shown by the above review that achievement motivation striving is no longer seen as male rather than female characteristics.

The chapter also discussed on the various issues concerned with the achievement motivation, types of motivation, indices of motivation, achievement motivation in school, forms of achievement motivation, how to develop achievement motive, measurement of achievement motivation, concept of academic performance, determination of performance in school work, relationship between achievement motivation and academic performance, the basic theories that are pertinent to the study such as David McClelland theory of achievement motivation, incentive theory, Sigmund Freud Psychoanalytic theory, Humanistic theory of Abraham Maslow's, arousal and performance theory by Yerkes and Dodson and Atkinson Theory of Performance.

This research is unique from all the empirical studies reviewed in the sense that researcher focuses on relationship between achievement motivation and academic performance among science senior secondary school students Kano State. Thus, this research seeks to bridge gap in the science senior secondary school students in Kano State.

The gap between this work and the literature reviewed include: Most the previous works were descriptive survey studies, most of the previous works reviewed were foreign-based and were conducted at the secondary schools which does not involved sciences senior secondary schools. In other words, the reviewed empirical studies looked at related variables but in most cases the studies did not focus on achievement motivation, and academic performance. It is this gap that the present study intends to fill.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter primarily deals with the type of research design used in this study; the population, sample and sampling techniques. Other segments includes instrumentation, validity and reliability of the instruments, procedure for data collection, and data analysis procedure.

3.2 Research Design

This study employed correlational research design. A correlational study determines whether or not two variables are correlated. Correlation study is concerned with measuring the degree of relationship between two or more variables for the purpose of making predictions about relationship (Haruna, 2010). Correlational study shows if a relationship exists but does not indicate causation. This means to study whether an increase or decrease in one variable corresponds to an increase or decrease in the other variable (Kalla, 2002). The design permits the use of predetermined set of questions that is given to a sample – that is, one that is representative of the larger population of interest, one can describe the attitudes of different populations from which the sample was drawn. Further, one can compare the attitudes of different populations as well as look for changes in attitudes over time and also allows one generalize the findings from the sample to the population, which is the whole purpose of survey research (Shaughnessy, Zechmeister & Jeanne, 2011).

The method was adopted because it allows researcher to examine the interrelationship between variable and to develop explanatory inferences. This strategy is considered most suitable for this study because of the geographical coverage of the schools.

The study was correlation research design with the meant to establish the relationship between Achievement Motivation and Academic Performance among Science Senior

Secondary School Students in Kano State, Nigeria and this makes the design suitable for the present study.

3.3 Population of the Study

The population of this study comprises all SS2 Students in the Public Science Senior Secondary Schools of Kano State, Nigeria. Kano State Science and Technical Schools Board has a total of five (5) Educational Zones, which includes Dambatta Zone, Dawakin-Kudu, Gaya Zone, Nassarawa Zone and Wudil Zone. According to statistical data from Kano State Science and Technical Schools Board and The Schools, the entire population of Science Senior Secondary School Students in Kano as at 2015/2016 fuse at (2,665). The population is heterogeneous as it comprises male and female. Furthermore, the schools comprises both day and boarding schools.

Table 3.1 shows the population distribution of the students seven (7) Science Senior Secondary Schools.

Table 3.1.1 Population Characteristics of SS2 Students of Seven (7) Science Secondary Schools in Kano State.

Location	**Schools**	**Population**	
		Male	**Female**
Nassarawa Zone	Day Science College, Kano	366	0
	Governors College, Kano	378	0
Dambatta Zone	D/Tofa Science College	504	0
Dawakin Kudu Zone	D/Kudu Science College	484	0
	First Lady College, Kano	0	254
Gaya Zone	Maitama Sule Science College	325	0
Wudil Zone	Girl's Science College, Garko.	0	354
Total	**7**	**2,057**	**608**

Source: Kano State Science & Technical Schools Board and The Schools involved (2015/2016).

3.4 Sample and Sampling Technique

A sample is precisely a portion or a part of a population which a researcher used, thus, sample for this research shared common characteristics with the entire population of the study, and served as a representatives of the population. The sample of this study consists of three hundred and two (302) students from the Public Science Senior Secondary two (SS2) drawn from four (4) Science Senior Secondary Schools. Using Krejcie and Morgan (1970) table for determining sample size, the appropriate sample size recommended for the study is three hundred and two (302) students (See Appendix L). The schools for the study were classified by zones. For even representation, non-proportionate stratified random sampling procedure will be used to draw four zones. The researcher writes the names of all the members of the population assigned to them on separate piece of paper, fold these piece of paper and put them in a bag then shakes the bag well to mix up the folder pieces of paper properly. Then the researcher put his hand into the bag without looking into the bag and picks up one piece of paper at a time until the required number of four (4) zones have been selected. Before each draw, the piece of paper is returned to the bag. The population is made up of two (2) male school and two (2) female school selected randomly for a fair representation (See Appendix D, F, H, and J). Therefore, four (4) out of the seven (7) Science and Technical School Board Zones were selected purposely to represent the entire Science Senior Secondary School (SS 2) in Kano State. The total number of SS2 students in the sample was 1,348.

Simple random sampling technique was used to select four (4) Science Senior Secondary Schools. An arm of SS 2 was selected from each of the four zones considering the fact that, the level have been academically exposed and may be able to handle the questionnaire.

Table 3.1.2 Sample for the Study

Zonal office	Schools	Population by Gender		Sample
		Male	Female	
Nassarawa Zone	Day Science College, Kano	366	0	82
Dambatta Zone	D/Tofa Science College	378	0	84
Dawakin Kudu Zone	First Lady College, Kano	0	254	57
Wudil Zone	Girl' Science College, Garko	0	354	79
Total	**4**	**744**	**608**	**302**

3.5 Instrumentation

Instruments for data collection are:

a. Achievement Motivation Inventory Questionnaire (AMIQ) adapted from Muthee J.M. and Immanuel, Thomas. (2009),

b. Academic Performance Instrument in Biology.

3.5.1 Achievement Motivation Inventory Questionnaire (AMIQ)

The 32 items Achievement Motivation Inventory scale was developed by Muthee and Immanuel (2009) and it was adapted by the researcher (See Appendix A). The questionnaire comprises of four(4) sections, A, B, C and D. Section A demand personal information questions, Section B, C and D consists of five Likert-Scale statements ranging from 5 – 1, rated as Completely Agree(C.A.)=5, Mostly Agree(M.A.)=4, Agree to Some Extent(A.S.E.)=3, Mostly Disagree(M.D.)=2, and Completely Disagree(C.D.)=1; The scale has 32 items in total where 11 items are measuring Needs, 10 items are measuring Drive and 11 items are measuring Motives. This scoring scheme ensured that higher scores, higher levels of achievement motivation and lower scores indicate low levels of achievement motivation. The highest possible scores is 160, moderate score is 115 and lowest score is 65. This instrument has the reliability coefficient of .81 (See Appendix L).

Scoring Guide

32 - 65 Lower Achievement Motivation

69 - 115 Average Achievement Motivation

116 - 160 Higher Achievement Motivation

3.5.2 Academic Performance Test in Biology (APTB)

The academic performance was constructed by the researcher. It covers SS 2 syllabus. It is made up of twenty (20) items in objectives form, each question is followed by four (4) options lettered A to D with a single correct answer which has a score of five mark while the other three options serve as distractors with zero score. The highest score is 100 and the lower achiever 39 and below while the average achiever is 50 -59. From 60 and above are the most impressive scores (higher achiever). This instrument being the second variable of this research was used by the researcher to assess the academic performance of the selected students in Biology (See Appendix B). This instrument has the reliability coefficient of .88 (See Appendix M).

Scoring Guide

0 - 39 % Poor Academic Performance

40 - 49% Low Academic Performance

50 - 59% Average Academic Performance

60 - 100% High Academic Performance

3.6. Validity of the Instrument

3.6.1 Validity of the Instrument

To ensure validity of the instruments, the researcher were check the items on the questionnaire with guided copies of the objectives and hypotheses of the study to ensure that the instrument measured truly and accurately what is intended to measure. In other words, they were required to examine the instrument with regard to the suitability of the language, non-ambiguity of language and the extent to which the instrument properly measure the

variables under study. Furthermore the instruments was presented to the researcher's Supervisors and other experts in the Department of Psychology and Counselling, Ahmadu Bello University, Zaria for vetting, correction, and contributions, their comments, criticisms and suggestions are incorporated in the final copy of the questionnaire that was approved by the supervisors' before administering it to the respondents.

The items analysis of Biology test which compared a set of best performance with another set of worst performance revealed that some questions were not appropriate for the student. From the whole set of questions nine (9), were revise and retained, one (1) were removed and five (5) were rewarded. The alterations hopefully taken care of the questions that are too difficult, too simple or rather ambiguous. This process of validation agreed with the views of Kerlinger as cited in Mohammed (2016) who opined that validation by experts or specialist in the field is an effective method for content validation of research instruments.

3.6.2 Pilot Test

According to Burns and Grove (2008), a pilot study a simply a smaller version of the actual study done in preparation of a proposed study. Conducting a pilot study will authenticate the feasibility of conducting a larger scale. Polit and Beck (2010) suggest that this will help the research team to spot any problems with the research methodology and to refine and develop data collection instruments. Based on above recommendation, a pilot study was conducted in Maitama Sule Science Secondary School, Gaya, with (30) students, which is part of the population of the study but not part of the sample.

3.6.3 Reliability Instruments

The data collected from the pilot study was analyzed statistically for the purpose of reliability co-efficient. The Cronbach Alpha in Statistical Package for Social Science (SPSS) 16.0 version to determine the reliability co-efficient was used to determine stability of the items (See Appendix L and M). After the analysis, the Cronbach Alpha yielded a consistency index in table 3.3;

Table 3.3 Reliability coefficient of Research Instruments

Q**uestionnaire**	**Reliabilities**
Achievement Motivation Inventory Questionnaire	0.81
Academic Performance Instrument in Biology	0.88

The reliability co-efficient will be considered adequate for the internal consistencies of the instruments. Creswell (2002) reported that an instrument is considered reliable if its reliability index is .70 and above.

3.7 Item Analysis

Item analysis refers to a statistical technique that helps instructors identify the effectiveness of their test items. In developing quality assessment and specifically effective multiple-choice test items, item analysis plays an important role in contributing to the fairness of the test along with identifying content areas that maybe problematic for students. Item analysis can help in identifying potential mistakes in scoring, ambiguous items, and alternatives (distractors) that don't work. Generally, items of moderate difficulty are to be preferred to those which are much easier or much harder.

3.7.1. Item Discrimination

Item discrimination or the discriminating power of a test item refers to the degree to which success or failure on an item indicates possession of the ability being measured. It determines the extent to which the given item discriminates among examinees in the function or ability measured by the item. This value ranges between 0.0 and 1.00. Higher the value, more discrimination of the item is. A highly discriminating item indicates that the students who had high tests scores got the item correct whereas students who had low test scores got the item incorrect. Items having discrimination index above .20 are ordinarily regarded satisfactory for use in most tests of academic achievement (Singh, 2012). The items analysis of Biology test which compared a set of best performance with another set of worst

performance revealed that some questions were not appropriate for the student Table 3.4 gives a summary of the result.

Table 3.4. Item Analysis of Biology Test

Items	Ru_{30}	Rl_{30}	DI		DIS	
1	10	10	66.67%	R	0%	*
2	10	10	66.67%	R	0%	*
3	0	4	13.33%	*	-26.67%	*
4	8	5	43.33%	R	20.00%	R
5	8	6	46.67%	R	13.33%	R
6	10	10	66.67%	R	0%	*
7	8	8	53.33%	R	0%	*
8	8	2	33.33%	R	40.00%	R
9	9	3	40.00%	R	40.00%	R
10	9	1	33.33%	R	53.33%	R

KEY for Item Difficulty	KEY for Discrimination
***** Discarded for being too difficult	***** Discarded for being too difficult
R Reframed and accepted	R Revise and retained

From the whole set of questions nine (9), were revise and retained, one (1) were removed and five (5) were rewarded. The alterations hopefully taken care of the questions that are too difficult, too simple or rather ambiguous.

3.8 Procedure for Data Collection

Data was collected from each of the four schools involved using Achievement Motivation Questionnaires and Academic Performance Instrument in Biology prepared by researcher. This was done after a letter of introduction was collected from the Department of Educational Psychology and Counselling and seeking permission from Ministry of Education, Science and Technical Schools Board (See Appendix C). The researcher submitted the introduction letter to The Executive Secretary Science and Technical Schools Board, Kano. A letter of permission to carry out the research was obtained from the Deputy Director Planning Research and Statistic in order for the researcher to carry out the study

(See Appendix D). The researcher obtained documents such as students enrolments from the seven schools involved in these study (See Appendices E, F, G, H, I, J, K).

The principals was informed about the purpose of the study so that they grant permission to access, an empty class and biology teacher was required for the conduct of the study. Before the proper administration of the instruments, the researcher hold a brief orientation with research assistants and selected respondents of each school about the nature and objectives of the study and also assured them confidentiality, the aim for this to assist in comprehending the concept. The distribution of the questionnaires was done by the researcher and some research assistants after they are given proper training and guidance on how to administer or response to the instruments. The use of the research assistants help to ensure that the targeted sample for the research were used for the completion of the questionnaire. This also help to ensure a high return rate.

Instruments was administered to students during normal class time but in a room specifically set aside for the purpose of the research. In a situation where there was a problem of understanding the questions/ statements, literacy by the students, or any problem may raise, the researcher read the items and explain to the participants. All the respondents are required to fill the questionnaire immediately as it is given without restriction to time limit; however, it was retrieved the same day i.e. an on the spot strategy. The schools authority and students were praised for their anticipation in participating in the study.

3.9 Procedure for Data Analysis

The data collected was used to test the hypotheses and answer research question raised for these study. Frequency and percentages were used to analyse the demographic data of the respondents while mean scores and standard deviation was used for answering research questions. Pearson Product Moment Correlation (r) was used to test hypotheses H_{01}, H_{02} and H_{03} while ANOVA was used for H_{04}. Accepting or rejecting a given null hypothesis was made at .05 level of significance.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The study was basically to assess the relationship between the Achievement Motivations and Academic Performance among science senior secondary schools students in Kano State. To achieve this main objective, the study was structured along four objectives was formulated along 4 research questions answered as well as 4 research hypotheses tested. The sample of 302 students was used for this research. The Statistical package of SPSS version 23 was used to carry out the analysis. The 32 items on achievement motivation divided into achievement motivation for drives, motives and needs were presented in tables with each item frequency of response of Completely Agree. Mostly Agree, Agree to Some Extent, Mostly Disagree and Completely Disagree with item mean. The cumulative mean is compared with the decision mean of 3.000 to determine if the students overall motivational drives, motives and needs as positive or negative. The Bio data variable consist of students gender Descriptive mean statistics were used to answer the 4 research questions while the Pearson product Moment Correlation (r) statistics to test the first three hypotheses while hypotheses four was tested with the Analysis of Variance statistical (ANOVA). The four null hypotheses were tested at 0.05 level of significance. Summary of major findings, conclusions as well as recommendations were also part of the analysis

Table 4.1. Demographic Distribution of Respondents by Achievement Motivation Categories

Variables	N	Mean	S D	Std. Error
Low achievers	28	43.25	7.74417	1.46351
Moderate achievers	59	90.1186	15.13398	1.97028
High achievers	215	122.4419	12.78927	0.87222
Total	**302**	**108.7848**	**27.69189**	**1.59349**

Table 4.1 showed that a total of 28 or 9.27% of the student respondents in this study are low achievers, 59 or 19.54% are moderate achievers and the remaining 215 representing 71.19% are high achievers students.

4.2 Testing of Research Hypotheses

Four null hypotheses were used in this study and were tested using Pearson Product Moment Correlation (r) and Analysis of Variance (ANOVA) respectively. The basis for retaining or rejecting the hypotheses was 0.05 alpha level of significance. Therefore the following Tables below will help in providing statistical evidence that will prove or disapprove a given hypotheses.

Hypotheses One: The null hypotheses state that there is no Significant Relationship between the Achievement Motivation Needs and Academic Performance among Science Senior Secondary Schools Students in Kano State.

Table 4.2.1. Pearson Correlation (r) on Relation between Achievement Motivation Needs and Academic Performance

Variable	N	Mean	Std	Df	Corr index r	Critical	P
Achievement Motivation Needs	302	47.6093	5.4881	300	0.899**	0.113	0.003
Academic Performance	302	43.3212	5.60311				

Correlation index > Pearson critical, p < 0.05 at df 300

Results of the Pearson Product Moment Correlation (r) statistics revealed that Significant Relationship exist between Achievement Motivation Needs and Academic Performance among Science Senior Secondary Schools Students in Kano State. Reasons being that the correlation index r value of 0.899 is higher than the 0.113 Pearson critical value at df 300, while the calculated p value of 0.003 is lower than the 0.05 alpha level of significance, The Relationship between Achievement Motivation Needs and Academic Performance is directly proportional, that is, the higher the Achievement Motivation Needs, the higher the Academic Performance among Science Senior Secondary Schools Students in

Kano State. Consequently, the null hypotheses which state that there is no Significant Relationship between Achievement Motivation Needs and Academic Performance among Science Senior Secondary Schools Students in Kano State, is hereby rejected

Hypotheses Two: The null hypothesis state that there is no Significant Relationship between Achievement Motivation Drives and Academic Performance among Science Senior Secondary Schools Students in Kano State.

Table 4.2.2. Pearson Correlation (r) on relation between Achievement Motivation Drives and Academic Performance.

Variable	N	Mean	SD	Df	R	Critical	P
Achievement Motivation Drives	302	47.6093	5.4881	300	0.920**	0.113	0.002
Academic Performance	302	36.8113	5.62571				

Correlation index > Pearson critical, p < 0.05 at df 300

Results of the Pearson Product Moment Correlation (r) statistics revealed that Significant Relationship exist between Achievement Motivation Drives and Academic Performance among Science Senior Secondary Schools Students in Kano State. Reasons being that the correlation index r value of 0.920 is higher than the 0.113 Pearson critical value at df 300, while the calculated p value of 0.002 is lower than the 0.05 alpha level of significance, The Relationship between Achievement Motivation Drives and Academic Performance is directly proportional, that is, the higher the Achievement Motivation Drives, the higher the Academic Performance among Science Senior Secondary Schools Students in Kano State. Consequently, the null hypotheses which state that there is no Significant Relationship between Achievement Motivation Drives and Academic Performance among Science Senior Secondary Schools Students in Kano State, is hereby rejected.

Hypotheses Three: The null hypothesis state that there is no Significant Relationship between Achievement Motivation Motives and Academic Performance among Science Senior Secondary Schools Students in Kano State.

Table 4.2.3. Pearson Correlation (r) on relation between Achievement Motivation Motives and Academic Performance.

Variable	N	Mean	SD	Df	Corr index r	Critical	P
Achievement Motivation motives	302	47.6093	5.4881	300	0.931**	0.113	0.001
Academic Performance	302	38.4868	5.54338				

Correlation index > Pearson critical, p < 0.05 at df 300

Results of the Pearson Product Moment Correlation (r) statistics revealed that Significant Relationship exist between Achievement Motivation Motives and Academic Performance among Science Senior Secondary Schools Students in Kano State. Reasons being that the correlation index r value of 0.931 is higher than the 0.113 Pearson critical value at df 300, while the calculated p value of 0.001 is lower than the 0.05 alpha level of significance, The Relationship between Achievement Motivation Motives and Academic Performance is directly proportional, that is, the higher the Achievement Motivation Motives, the higher the Academic Performance among Science Senior Secondary Schools Students in Kano State. Consequently, the null hypotheses which state that there is no Significant Relationship between Achievement Motivation Motives and Academic Performance among Science Senior Secondary Schools Students in Kano State, is hereby rejected.

Hypotheses Four: The null hypothesis state that there is no significant difference in achievement motivation of high, moderate and low achiever among science senior secondary schools students in Kano State.

Table 4,2,4a: Analysis of Variance Statistics on Differences in Achievement Motivation of High, Moderate and Low Achievers.

	Sum of Squares	Df	Mean Square	F	F critical	Sig.
Between Groups	180912.567	2	90456.284	541.943	2.60	0.000
Within Groups	49906.443	299	166.911			
Total	**230819.01**	**301**				

Table 4.2.4 b: Descriptive statistics on difference in achievement motivation of high, moderate and low achievers among science senior secondary schools students in Kano State.

Variables	N	Mean	S D	Std. Error
Low achievers	28	43.25	7.74417	1.46351
Moderate achievers	59	90.1186	15.13398	1.97028
High achievers	215	122.4419	12.78927	0.87222
Total	**302**	**108.7848**	**27.69189**	**1.59349**

Table 4.2.4 c: Scheffe Post hoc mean multiple comparison on difference in Achievement Motivation of High, Moderate and Low achievers among Science Senior Secondary Schools Students in Kano State

		Subset for Alpha = 0.005		
Motivation Status	**N**	**1**	**2**	**3**
Low Achievers	28	43.2500	0	0
Moderate Achievers	59	0	90.1186	0
High Achievers	215	0	0	122.4419
Sig.		**1.000**	**1.000**	**1.000**

Looking at the Analysis of variance statistics and the descriptive statistics above, revealed significant differences exist in achievement motivation of high, moderate and low achievers among science senior secondary schools students in Kano State.

Reasons being that the computed p value of 0.000 being ;lower than the 0.05 alpha level of significance and the computed F value of 541.943 being higher than the 2.60.,

The computed statistics showed that their computed Achievement motivations scores are 43.2500, 90.1186 and 122.4419 by students who are low achievers, moderate achievers and high achievers respectively

The Post Hoc means comparison put the means of low achievers, moderate achievers and high achievers in Sub sets1, Subset2 and subset 3 respectively showed that there is significant differences among the three groups. Therefore the null hypothesis which state that there is no significant difference in achievement motivation of high, moderate and low achievers among science senior secondary schools students in Kano State, is hereby rejected.

4.5 Summary of Major Findings

The followings are the summary of the major findings of the study, these are:

1. Significant relationship exist between the achievement motivation needs and Academic Performance among science senior secondary schools students in Kano State. The relationship between the achievement motivation needs and Academic Performance is directly proportional, that is, the higher the achievement motivation needs, the higher the Academic Performance among science senior secondary schools students in Kano State (r=0.931, P=0.001).

2. Significant relationship exist between the achievement motivation drives and Academic Performance among science senior secondary schools students in Kano State. The relationship between the achievement motivation drives and Academic Performance is directly proportional, that is, the higher the achievement motivation drives, the higher the Academic Performance among science senior secondary schools students in Kano State (r=0.899, P=0.003).

3. Significant relationship exist between the achievement motivation Motives and Academic Performance among science senior secondary schools students in Kano State. The relationship between the achievement motivation motives and Academic Performance is directly proportional, that is, the higher the achievement motivation motives, the higher the

Academic Performance among science senior secondary schools students in Kano State (r=0.920, P=0.002).

4. Significant differences exist in the overall achievement motivation of respondents who are highly, moderately and lowly motivated students among science senior secondary schools students in Kano State. The computed statistics showed that their computed Achievement motivations scores are 43.2500, 90.1186 and 122.4419 by students who are lowly motivated, moderately motivated and highly motivated respectively (F=341.943, P=0.000).

4.6 Discussion

The results of this study depict the strong correlation among the two variables i.e. achievement motivation (needs, drives, and motives,), and academic performance. Results show that the subject specific achievement motivation (needs, drives, and motives) are significantly correlated with each other.

From the findings of this study, the result showed that significant relationship exists between achievement motivation needs and academic performance among science senior secondary schools students in Kano state. The findings of this study collaborate with the early findings of Tella (2007); who investigated the impact of motivation on student's school academic achievement in mathematics. The findings of this study revealed there is significant difference when extent of motivation was taken as variable of interest on academic achievement in mathematics based on the degree of their motivation.

The findings also agree with that of Skhwari (2014), the findings revealed that relationship existed between achievement motivation and academic performance; the finding coincided with that of Baggiano (1992), it was found that motivational orientation predicted children's standardized achievement scores, it revealed that achievement motivation positively influenced academic performance.

The findings of this study, also reveal that significant relationship exists between achievement motivation drives and academic performance among science senior secondary schools students in Kano state. The findings of this study agrees with the early findings of Chetri (2014), who examined achievement motivation of adolescent and its relationship with academic achievement. Results revealed there is significant relationship between achievement motivation and academic achievement; the findings also collaborates with that of Mohammed (2016), who examined relationship between achievement motivation, self-efficacy and academic achievement among NCE students in colleges of education in Kaduna state. The findings revealed that there is significant relationship between achievement motivation and academic performance.

Similarly, the findings agree with that of Ali and Musa (2012), the result indicates that there is significant difference in students' achievement motivation; students' who passed showed more motivation rather than students' who failed. The findings also agree with that of Akram and Ghazanfar (2014), who explore the relationship of achievement motivation and academic performance, the findings indicates a significant positive relationship between achievement motivation and academic performance of the students.

The findings is contrary to the findings of Edet, Onete, Peter and Udey (2012), their findings revealed that neither students' academic achievement motivation nor students' social achievement motivation had any significant influence on education students' academic performance.

Furthermore, the findings of this study reveal that relationship exists between achievement motivation motives and academic performance among science senior secondary schools students in Kano state. The findings of this study agree with the early findings of Awan, Nouren and Naz (2011), who examined the achievement motivation and its relationship with achievement motivation and self-concept are significantly related to academic achievement. The findings of this study also coincided with the findings of Turner,

Megan and Robert (2009), studied the influence of parenting styles, achievement motivation and self-efficacy on academic performance. The results found that there is significant relationship between both intrinsic motivations, self-efficacy predicted academic performance.

This findings also corroborated with the findings of Adams and Durowoju (2011), examined relationship between motivation and student's academic achievement, as well as male and female cognitive achievement in secondary school. The results showed that motivation is positively related with student's cognitive achievement, these finding also related to McClelland (1985), view people with high motivation motives will acts in ways that will help to outperform other, meet, surpass some standard of excellences or to do something unique.

Finally, the findings of this study also reveal that significant differences exists in the overall achievement motivation of respondents who are highly, moderately and lowely motivated among science senior secondary schools students in Kano state. The findings of this study collaborate with the early findings of Affum- Osei, Barnie, Eric and Forkuoh (2014), study was carried out to investigate the relationship between achievement motivation academic, academic self-concept and academic achievement of high school students. The results showed that highly motivated students' performed well on mathematics achievement test. The findings also coincided with that of Tella (2007) and Sikwari (2014), maintained that highly motivated students performed better academically than lowely motivated, these corroborated with McClelland (1961), students who were highly motivated were the most academically engaged in the group, followed by those who were moderately and lastly by those who were lowely motivated.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of the major findings of the study, the basic conclusions that could be deduced as well as proposed some recommendations that will improve the academic performance and attitude of students in learning geometry

5.2 Summary

Ever wonder way some people seem to be very successful, highly motivated individuals? Where does the needs, the drive, or the motives come from? Motivation is an area of psychology that has gotten a great deal of attention, especially in the recent years. The reason is because, we all want to be successful, we all want direction and drive and we all want to be seem as motivated. Motivation may be regarded as something which prompts, compels and energizes and individuals to acts or behave in a particular manner at a particular time for attaining some specific goals or purpose.

Poor academic performance of students in external examination in Nigeria has become a source of great concern to parents, teachers, educationists, educational institutions and all stakeholders in education. This call for concerted efforts for remediation. It's against this background the researcher intends to investigate into the study of relationship between achievement motivation and academic performance among science senior secondary school students in Kano. The study was guided by four (4) objectives, four (4) research questions, four (4) research hypotheses and four (4) basic assumptions.

In chapter two, literature was reviewed based on the major concepts of the study such as concepts of motivation, concepts of achievement motivation and concepts of academic performance. In the process of the literature review, the theoretical aspects was considered of which McClelland's achievement motivation theory was reviewed. Sigmund Freud psychoanalytic theory of motivation, Maslow's theory of motivation, Arousal and

performance theory, Atkinson theory of intrinsic motivation were all reviewed. Also some empirical studies were examined in this chapter.

Chapter three examined the design of the study which employed correlational method, the population of the study which comprise all SS2 students in the public science senior secondary school students with population of 2,665 male and female. The sample for the study was drawn from the population of which 302 was considered appropriate as guided by the provision of Krejcie and Morgan (1970) table of sampling population. Two (2) instruments were used for the research namely: Achievement Motivation Inventory Questionnaire (AMIQ) and Academic Performance Test in Biology (APTB) and were validated by expert in the department of Educational Psychology and Counselling, A.B.U. Zaria. Cronbach Alpha in SPSS was used to compute the result of the pilot test on the instruments and the results read as follows:

For AMIQ has the reliability of 0.81 and APTB also has the reliability of 0.88. These reliability coefficients were considered reliable because of the high coefficient as indicated by the results.

In chapter four, Pearson Product Moment Correlation (r) and Analysis of Variance (ANOVA) were used to test hypotheses one(1), two(2), three(3) and four(4) respectively to this study.

5.3 Conclusions

On the basis of the findings from this study, the following basic conclusions could be deduced from the studies

The respondents' achievement motivation needs is high, especially most always work very hard to be among the best students in their schools and When they come to that someone like them, have achieved something great, they are motivated to do the something in a better way. The achievement for motivation drive is high with a cumulative mean agreement of 3.4060. Particularly majority are of the view that success in life has less to do with hard

work and more to do with luck, being in the right place at right time and they plan ahead what subject they should study at their free time. The achievement motivation for motive is high especially majority of the respondents like reading biography of great people in order to learn how they overcome hurdles and achieve in life and would like to deal with difficult situations, so that the blame or praise for its results come to them alone. The higher students is motivated the higher their level of motivational achievement/ expected and vice versa.

5.4 Contribution to Knowledge

The following points are raised as a contribution to knowledge:

1. The relationship between the achievement motivation needs and Academic Performance is directly proportional, that is, the higher the achievement motivation needs, the higher the Academic Performance among science senior secondary (r=0.931, P=0.001).
2. The relationship between the achievement motivation drives and Academic Performance is directly proportional, that is, the higher the achievement motivation drives, the higher the Academic Performance among science senior secondary schools students in Kano state (r=0.899, P=0.003).
3. The relationship between the achievement motivation motives and Academic Performance is directly proportional, that is, the higher the achievement motivation motives, the higher the Academic Performance among science senior secondary (r=0.920, P=0.002).
4. There is differences in the overall achievement motivation of respondents who are highly, moderately and lowly motivated students among science senior secondary schools students in Kano state. The computed statistics showed that their computed Achievement motivations scores are 43.2500, 90.1186 and 122.4419 by students who are lowly motivated, moderately motivated and highly motivated respectively (F=341.943, P=0.000).

5.5 Recommendations

The following points are raised that will improve the performance of students:

1. Students should be well motivated through using Needs, Drives and Motives motivational means to improve the students' academic performance among schools in Kano State.
2. Teachers and educators should make clear to the students that new motives will improve their self-image, which will have greater impact on students in achieving high academic performance.
3. The teachers should emphasize upon the fact that new motives is an improvement in prevailing cultural values.
4. The government should always study the level of the students' level of achievement of the students by giving each group the special attention they deserve in order to carry each group along in their academic pursuits.
5. The school authorities should employ capable and qualified guidance counselors and psychologists to guide the children in building their achievement motivation and subsequently their academic performances.
6. Academic counsellors should organize guidance programmes such as workshops, symposia, and public lectures periodically for science senior secondary schools students to equipped them with the needed skills to enhance their motivation.
7. Teachers should interact with students at close range to identify maladaptive behaviours that tend to hinder the development of proper level of achievement motivation in the students.
8. Parents and guardians should monitor the achievement motivation of their wards and children and visit the school authorities' for advice, in other words, parents/guardians should facilitate their wards development to the right type of achievement motivation through persistent encouragement and timely provision of their educational needs.

5.6 Suggestions for Further Studies

The study is by no means exhaustive, as the researcher suggest that further studies be carried out on the indices of needs for achievement motivation on the academic performance of students in North Western region of Nigeria

REFERENCES

Abdullahi, O.E. (2015), Relationship among achievement motivation, self-esteem, locus of control and academic performance of Nigerian University of students. *Psychological Review, 86(2), 141-151.*

Abesha, A. G. (2012). *Effects of parenting styles, academic self-efficacy, and achievement motivation on the academic performance of university students in Ethiopia* (Dissertation submitted in Fulfilment of the Requirements for the Award of Doctor of Philosophy, Edith Cowan University).

Abijo, J.A. 2008: *Effects of Two Methods of Teaching Essay Writing on Students' Learning Outcomes in Yoruba Language at the Senior Secondary School Level.* Ph. D. Thesis. Institute of Education. University of Ibadan.

Abouserie, R. (1995). *Self-esteem and achievement motivation as determinants of students' approaches to studying, Studies in Higher Education,* 20(1), 19-26.

Abu J. & Saleh M. A. (2000), *Educational Psychology*, Second Edition, Amman: Dar Al Masira Distribution and Printing.

Abuameerh, O.A. & Alsaudi, M. (2012). The relationship between achievement motivation & academic achievement for secondary school students at Salt in Jordan. *Dirasat, Educational Sciences, 39(1) 313- 320.*

Ackerman, P. L., Chamorro-Premuzic, T., & Furnham, A. (2010). Trait complexes and academic performance: Old and new ways of examining personality in educational contexts. *British Journal of Educational Psychology, 81*, 27-40.

Adeyemi, S. A. (2010): *Effects of Active Review and Panel Discussion on Students' Learning Outcomes in Senor Secondary School Economics in Ibadan.* A Research Proposal at Institute of Education, University of Ibadan, Nigeria (February, 2010).

Adeyemo, D. A. (2007). Moderating influence of emotional intelligence on the link between academic self-efficacy and achievement of university students. *Psychology Developing Societies, 19*(2), 199-213.

Affum-Osei, E; Eric, A.A.; Barnie, J, & Forkuoh, K. S. (2014) Achievement motivation, academic self-concept and academic achievement among high school students. *European Journal of Research and Reflection in Educational Sciences 2(2), 24-35.*

Ahmad, I., & Rana, S. (2012). Affectivity, achievement motivation, and academic performance in college students. *Pakistan Journal of Psychological Research, 27*(1), 107-120.

Akbaş, A., & Kan, A. (2007). Affective factors that influence chemistry achievement (motivation and anxiety) and the power of these factors to predict chemistry achievement-II. *Journal of Turkish Science Education,* 4(1).

Akinsola, M.K., Adedeji, Tella & Adeyinka, Tella. (2007). Correlates of academic procrastination and mathematics achievements of University undergraduate students. *Eurasia Journal of Mathematics, Science and Technology Education, 3(4), 363-370*.

Alade, O. M. & Omuruyi, I. V. (2014). Table of specification and its relevance in educational development assessment. *European Journal of Educational and Development Psychology, 2(1), 1-17.*

Amil, M. (2000). *Self-efficacy & academic performance in Economics in the Junior College.* Nanyang Technological University, Singapore.

Anderson, N. (2000). Web-Based: Instructional Effectiveness. World Conference on Educational Multimedia, Hypermedia and Telecommunications, 2000 (1), 1583-1585.

Ankomah, Y., Koomson, J., Bosu, R. & Oduro, G K.T. (2005). *Implementing* Quality *Education in Low Income Countries* .University of Cape Coast– Ghana. Institute for Educational Planning and Administration, 14.

Archana, K, & Chamundeswari, S. (2013). Self-concept & academic achievement of students at high school. *Journal of Sociological Research, 4, 105-113.*

Aremu, A. (1998). Motivating learners for more effective achievement in Mathematics. *Nigerian Journal of Applied Psychology, 4(1), 27-34.*

Atkinson, E. (1999). *Key Factors Influencing pupil in Design & Technology.* Retrieved August19, 2016 from www.http://scholar.lib.vt.edu/journals/JTE/v10ns/atindon.html.

Atkinson, J. & Feather, N. (1966). *A Theory of achievement motivation.* New York: Wiley and Son.

Atkinson, J. (1974). *Motivation & achievement motivation.* Washington, D. C.; V.H. Winston and Son.

Atkinson, J. W. (1957). Motivational determinants of risk taking behaviour. *Psychological Review, 64, 359- 372.*

Atkinson, J. W. (1964). *An introduction to motivation.* Princeton, NJ: Van Nostrand.

Audu, P. T. (2015). *Influence of parental support and academic performance on the manifestation of aggressive behaviour among secondary school students in Kaduna Metropolis.* Unpublished ABU M.Ed. Dissertation.

Awad, fathia (2004). *Achievement Motivation Scale*, Kuwait: Ministry of Education.

Awan R.N., Naz, A. & Noureen (2011), A Study of relationship between achievement motivation, self-concept & achievement in English and Mathematics at secondary level. *Journal of International Education Studies. 4(3), 72-79.*

Bachman J. G. & O' Mally P. M. (1986). Self-concept, Self-esteem and Educational Experiences: *Journal of Personal and Social Psychology;* 50, 1, 35-46

Badola, S. (2013). Effect of school's on academic achievement motivation of secondary level students' educational confab, 2(5), 61-66.

Bakare, C.G.M. (1977). *Motivational for occupational preference scale. Psycho-educational research publications.*

Bandura, A., Ross, D., & Ross, S. A. (1963). A comparative test of the status envy, social power, and secondary reinforcement theories of identificatory learning. *Journal of Abnormal and Social Psychology*, 67, 527-534.

Bank, C. & Finlapson, W. (1980). *Successful motivation of students in academic activities* in McClelland, D.C. Appleton-century-Crafts.

Barker, K. L., McInerney, D. M. & Dowson, M. (2003). Conceptualising students' goals and self-concept as multidimensional and hierarchically structured. *Paper presented at NZARE AARE, Auckland, New Zealand, November 2003 BAR03775*

Bar-Tal, D. Frieze, I. & Greenberg, M. (1974). *Attributional analysis of achievement motivation, some application.* Chicago, IL: American Educational Research Association Annual Meeting (ERIC Document Reproduction Service Number ED 087976).

Battle, E. (1965). Motivational determinants of academic task persistence. *Journal of Personality & Social Psychology, 2, 209 -218.*

Battle, E. (1966). Motivational determinants of academic competence. *Journal of Personality & Social Psychology, 4, 534-624.*

Bernardo, A. B. I. (2008). Individual and social dimensions of Filipino students' achievement goals, *International Journal of Psychology*, 43: 5, 886-891

Bichi, Y. M. (1997). *Students guide to research methodology*; Debis- Co. Press & Publishing Co. LTD.

Biehler, R.F. & Snowman, J. (1986). Psychology applied to teaching. (5^{th} Ed.). Boston: Houghton Miffin Company.

Boggiano, A. K.; Stephen D. & Katz, P. (1991). Mastery motivation in boys and girls: The roles of intrinsic versus extrinsic motivation. Sex roles: *A Journal of Research, 25(9 10), 511-520.*

Boggiano, A.K., Shields, A., M., Kellam, T., Thompson, E., Simons, J. & Katz, P. (1992). Helpless deficits students: The role of motivational orientation. *Motivation and Emotion. 16(3), 271-296.*

Bong, M., & Clark, R. E. (1999). Comparison between self-concept and self-efficacy in academic motivation research, *Educational Psychologist*, 34: 3, 139—153

Boopathiraj, C. & Chellamani, K. (2013). Analysis of test items on difficulty level and discrimination index in the test for research in education. *International Journal of Social Science & Interdisciplinary Research, 2(2), 189- 192.*

Brace, N., Kemp, R. & Snelgar, (2007), SPSS for Psychologists; A guide to data analysis using SPSS for windows, Version 16. L. Erlbaum Associates Inc.

Broussard, S. C. & Garrison, M. E. (2004). The Relationship between classroom motivation & academic achievement in Elementary school-aged children. *Family Consumer Science Research Journal, 33(2), 106- 120.*

Broussard, S. C. (2002). *The relationship between classroom motivation and academic achievement in first and third graders.* Unpublished Master's Dissertation. Louisiana State University, USA.

Brown, S. Armstrong S. & Thompson, I. (1998). *Motivating Students.* Kogan Page Limited.

Bruning, R.; Schraw, G. and Ronning, R. (1995). Cognitive Psychology and Instruction, (2nd Ed.) Upper Saddle River, NJ: Prentice Hall.

Bryne, B. (1996). Academic self-concept; its structure, measurement & relation to academic achievement. In B. Bracken (Ed). *Handbook of self-concept; developmental, social & clinical consideration. 287-316*. New York.

Burhans, K. K., & Dweck, C.S. (1995). Haplessness in early childhood: The role of contingent worth. *Child Development, 66, 1719- 1738.*

Burnett, P. C. (1999). Children's Self-Talk and Academic Self-Concepts, *Educational Psychology in Practice*, 15: 3, 195-200

Burns, N. & Grove, S. K. (2008). *The practice of nursing research:* Appraisal, Synthesis, and Generation of Evidence, 6th Ed.

Cambra, C. & Silvester, N. (2003). Students with special education needs in the inclusive classroom: Social integration & self-concept. *European Journal of Special Needs Education, 18, 197- 208.*

Campbell, J. & Fairey, D. (1985). Estimating social consensus. *Does high self-esteem cause better performance, interpersonal success & happiness:* Oxford University Press.

Campbell, J.P. & Pritchard, R.D. (1976). Motivation theory in industrial and organizational psychology. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology,* Chicago: Rand McNally. 63-130.

Campbell, M.C., Floyd, J. & Sheridan, J.B. (2011), Assessment of students' performance and attitudes of courses taught online versus onsite. *The Journal of Applied Business Research, 14(2), 45-51.*

Carol, B. (2014). *Intrinsic Motivation.* Retrieved on 22nd July, 2014 from www.giftkids.about.com.

Cassidy, T. (2000). Social background, achievement motivation, optimism and health: a longitudinal study, *Counselling Psychology Quarterly*, 13: 4, 399-412

Chandler, M., Heffer, R.W. & Turner, E.A. (2009), The influence of parenting styles, achievement motivation & self-efficacy on academic performance in College Students. *Journal of College Students Development. 50(3), 337-346.*

Chauhan, S. S. (2013). *Advanced educational psychology.* New Delhi: Vikas

Cheng, C. (1998): Conceptions of Success. Their correlates with pro-social orientation and behaviour in Chinese adolescents. Journal of Adolescence, 21(1) 31 – 42.

Chetri, S. (2014) Achievement motivation of adolescents & its relationship with academic achievement. *International Journal of Humanities and Social Science Invention* 3(6) 8-15.

Chiu, L. H. (1997). Development and Validation of the School Achievement Motivation Rating Scale. *Educational and Psychological Measurement, 57 (2), 292-305.*

Chowdhury, A., & Pati, C. (1997). Effect of Selected Family Variables on Social Preference, Academic Achievement and Self-Concept of Elementary School Children, *Early Child Development and Care*, 137(1), 133-143

Collins, C. J., Hanges, P. J., & Locke, E. A. (2004). The Relationship of achievement Motivation to Entrepreneurial Behaviour: A Meta-Analysis, *Human Performance*, 17: 1, 95-117 *Contemporary Educational Psychology*, *25*, 68-81.

Consortium for research on emotional intelligence in organizations, (2010). *Achievement motivation training.* http://www.eiconsortium.org.*com*

Coon & Miterer (2010). *Definition of intrinsic motivation.* Retrieved on 22nd July, 2014 from *www.google.com*

Creswell, J.W. (2012). *Educational research, planning, conducting & evaluating quantitative & qualitative research*, Boston, M.A: Pearson.

Crothers, L., Hughes, T. & Morine, K. (2008). *Theory and cases in school-based consultation;* A resource for school psychologist, school counsellors. New York: Routledge Taylor & Francis Group. Retrieved on 23/03/2016 from www.http:/books.google.com.

Cueva, C. (2006). *An achievement motivation program for young minority students utilizing cognitive-behavioural techniques* (Doctoral dissertation Texas A & M University Corpus Christi). Available from ProQuest Dissertations and Theses database. (UMI No.3233955).

Daft, R. (2008). *The Leadership experience (4th Edition).* Mason, O. H: South Western, Cengage Learning.

Dai, D. Y., Moon, S. M., & Feldhusen, J. F. (1998) Achievement motivation and gifted students: A social cognitive perspective, *Educational Psychologist*, 33: 2, 45-63

Davis-Kean, P.E., Eccles, J.S. & Linver, M.R. (2014). Influences of gender on academic achievement.

Deary, I. J., Strand, S., Smith, P., & Fernandes, C. (2007). Intelligence and educational achievement. *Intelligence, 35*, 13-21.

deCharms, R. (1972). Personal causation training in the schools. *Journal of Applied Social*

Deci, E. & Ryan, R. M. (1985). *Intrinsic motivation & self-determination in human behavior (Perspectives in Social Psychology).* . New York: Plenum Press. Fontana, D. (1981): Psychology for Teachers. London: Macmillan Press Ltd.

Deci, E. L., Ryan, R. M. (2000). Self-determination theory & facilitation of intrinsic motivation, social development, and Well-being. *American Psychologist, 55(1), 68 -78.*

Deci, E. L., Ryan, R. M. (2000). The "What" and "Why" of goal pursuit*:* human needs & self- determination of behaviour. *Psychological Inquiry, 11(4), 227- 268.*

Deci, E. L., Vallerand, R. J., Pelletier, L. G. & Ryan, R. M. (2000). Motivation & education: The self- determination perspective. *Educational Psychologist,* 26(5), 325- 346.

Denhardt, R. B., Denhartdt, J. V. & Aristigueta, M. P. (2008). Managing human behaviour in public & non-profit organizations. Sage Publications, Inc. *Journal of Personality and Social Psychology. 47, 944-952.*

Dörnyei, Z. (2009). The L2 motivational self-system. In Z. Dörnyei, & E. Ushioda (Eds.), Motivation, language identity and the L2self (9–42). Bristol: Multilingual Matters.

Dowson, M. & McInerney, D. M. (2001). Psychological parameters of students' social & work avoidance goals: A qualitative investigation. *Journal of Educational Psychology, 93(1), 35- 42.*

Eccles, J. S. & Wigfield, A. (1995). In the mind of the achiever: The structure of adolescents' academic achievement related- beliefs and self-perceptions. *Personality and Social Psychology Bulletin, 21,215- 225.*

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of* Effects on affective and cognitive achievement motivation. *Pertanika Journal of Social*

Eccles, J. S., Wigfield, A. & Schiefele, U. (1998*).* Motivation to succeed. In W. Damon (Series Ed.) and N. Eisenberg (Vol, Ed.), *Handbook of Child Psychology* (5th Ed., III, 1017-1095). New York: Wiley.

Edet, P.B., Ogbor, P.B., Onete, O. U. & Udey F.U. (2012), Academic performance: A function of achievement motivation among education students of Cross River University of Technology, Calabar. *Review of Higher Education in Africa (RHEA), 4, 63-83, 313-320.*

Elias, H., & Rahman, W. R. A. (1994). *Achievement motivation training for university students:*

Elliot, A. J., & McGregor H. A. (2001). Achievement goal framework. *Journal of Personality and Emotion*, 16(3), 271-296.

Fincham, F. D. & Cain, K. M. (1986). Learned helplessness in humans: A developmental analysis. *Developmental Review. 6, 301- 333.*

Fontana, D. (1981). *Psychology for Teachers*. London: Macmillan Press Ltd.

Fontayne, P., Sarrazin, P., & Famose, J. (2001). Culture & achievement motivation in sport: A qualitative comparative study between Maghrebian and European French adolescents. *European Journal of Sport Science, 1(4), 72- 76.*from http://www.nichgy.org

Gay, R. L. (1996). *Educational Research: Competencies for analysis and Application* (3rd Ed) New York *European Journal of Research and Reflection in Educational Sciences* 2(2), 2014 *ISSN 2056-5852* Progressive Academic Publishing Page 36 www.idpublications.org

Gesinde, A. M. (2000). Motivation. In Z.A.A. Omideyi (Editor) *Fundamental of guidance & counselling.* Kanead Publishers Limited, Ibadan, Nigeria.

Ghazuini, S.D. & Khajehpour M. (2011), Gender differences in factors affecting academic performance of high school students. *Journal of Procedia Social & Behavioral Sciences. 15(2011), 1040-1045.*

Goldberg, M. D. (1994). *A developmental investigation of intrinsic motivation: Correlates, causes, & consequences in high ability students.* (PhD. Dissertation, University of Virginia), Dissertation Abstracts International, 55-04B, 1688.

Granewell, C. (2000). *Sex differences in second language learning*. The ring. University of Victoria.

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and Informational Components. *Developmental Psychology, 17, 300-312.*

Harter, S. (1982). The Perceived Competence Scale for children. *Child Development,* 53**,** 87 93.

Harter, S. (1983). Developmental perspectives on the self-system. In P. H. Mussen (Ed.), New York: Wiley. *Handbook of Child Pschology, 4, 275- 385.*

Harter, S. (1990). Causes, correlates and the functional role of global self-worth: A life-span perspective. In J., Kolligian R. Sternberg (Eds.), New Haven, CT: Yale Univ. Press. *Perceptions of competence and incompetence across the life-span (*67- 98*).*

Haruna, A.S. (2010). *Research methods: a simple guide to educational inquiries.* Albarka press and publisher L.T.D., F.C.E., Kano.

Haruna, A.S. (2016). *Educational psychology.* Albarka press and publisher L.T.D., F.C.E., Kano.

Hattie, J.B. (1992). *Self-concept.* Hillsdale, NJ: Lawrence Erlbaum Associates

Helmke, A. & Van Aken, M. A. G. (1995). The causal ordering of academic achievement and self- concept of ability during elementary school: A longitudinal study. *Journal of Psychology, 87, 624- 637.*

Hetherington, E. M. (1967). The effects of familial variables on sex typing, on parent-child similarity, and on imitation in children. In J. P. Hill (Ed.), Minneapolis: University of Minnesota Press. *Minnesota symposia on child psychology (1), 82-107.*

Hotulainen, R. H. E., & Schofield, N. J. (2003). Identified pre-school potential giftedness and its relation to academic achievement and self-concept at the end of Finnish comprehensive school. *High Ability Studies,* 14(1), 55-70

House, J. D. (1996). Student expectancies and academic self-concept as predictor of science achievement. *The Journal of Psychology, 130, 679-687.*

Houston, J.P. (1985). *Motivation.* New York: Macmillan Publishing Company.

Huitt, W. (1998). Educational psychology interactive: self-concept and self- esteem. Retrieved November 3, 2013 from http://www.Chiron.valdosta.edu/whuitt/col/regsys/self.

Iyaagba, B. (1993*): Reading, writing & discussion strategies: determinants of secondary students' achievement & attitude in English composition writing skills.* Unpublished Ph.D. Thesis, University of Ibadan.

Jacobs, J. E., Hyatt, S., Eccles, J. S., Osgood, D. W., & Wigfield, A. (2002). The use of multi-level modelling to study individual change and context effects in achievement motivation. In P.R. Pintrich & M.I. Maehr (Eds.), New York; Elsevier Sciences. *New directions in measures and methods.* 12, 277-318.

Johnson, J. O. (1996). *Child Psychology*. Wusen Press Limited. Calabar, Nigeria. *Journal of Educational Science* 6(1) 19-25.

Kagan, J. (1964). The acquisition and significance of sex-typing and sex-role identity. In M. Hoffman & L. Hoffman (Eds.), *Review of child development research*, 1, 137- 167. New York: Russell Sage.

Kalla, S. (2002). *Correlational study*. Retrieved on August 15, 2016 from http://explorable.com/correlational-study.

Kathryn, D. (2010). *Academic achievement.* Retrieved June 14, 2016,

Kaushik, N., & Rani, S. (2005). A comparative study of achievement motivation, home environment and parent child relationship of adolescents. *Journal of Psychological.*

Keefe, J. & Jenkins, J. (1993). *Eye on education: Instruction and the learning environment***.** Larchmont, NY.

Kerlingar, F.N. and Howard, B. L. (2000): *Foundations of behavioural research.* 4th Edition.

Khalifa, Abdul Latif, (2000), *Motivation and Achievement*, Cairo: Ghareeb Printing and Publishing.

Khazaei, K., Esmaeilpoor, M., & Eslami, N. (2012). The determination of achievement motivation on the basis of perfectionism dimensions and coping styles of principals of pre-schools centers of Mazandaran province.*Middle-East Journal of Scientific Research, 11*(11), 1491-1499.

Koutsoulis, M. K. (1995). *Environment and its relationship to self-concept, attitude toward school, educational aspiration, career expectations, and achievement of high school students in Cyprus.* Dissertation abstract international, DAI_A-56/06A. 219.

Krejcie, R.V., & Morgan, D.W. In: Cohen, L. Manion, A. L. & Marrison, K. (2000). *Research Methods in Education (5th Edition).* London: Routledge Falmer.

Kulka, A. (1972). Attribution determinants achievement related be behaviour. *Journal of Personality and Social Psychology. 72(21), 166-174.*

Lawler, E. E. (1994). *Motivation in work organizations (Jossey Bass Business and Management Series).* Bassey-Bass Inc. Pub.

Lawrence, D. (1996) *Enhancing Self-esteem in the Classroom.* London: Paul Chapman.

Lepper, M. R. Corpus, J. H., & Iyngar, S. S. (2005). Intrinsic and extrinsic motherational orientations in the classroom: Age differences and academic correlates. *Journal of Educational Psychology, 97(2), 184-190*

Lepper, M.R. (1988): *Motivational considerations in the study of instruction. Cognition and Instruction.* 5(4), 289-309.

Litchfield, B. and Newman, E.J., (1999). Differences in student and teacher perceptions of motivating factors in the classroom environment. *National Forum Journals, Home Page, NFAER Table of Contents.*

Liu, Q., & Zhu, X. (2009). Investigation and analysis on the achievement motivations of 278 senior high school students. *International Journal of Psychological Studies, 1*(1), 229- 240.

Lopez, B. (2008). *The efficacy of an achievement motivation program* (Doctoral dissertation Texas A. & M. University Corpus Christi). Available from ProQuest Dissertations and Theses database. (UMI No. 3322113)

Lumsden, L.S. (1994): *Student Motivation to Learn*. Eric Clearinghouse on Educational Management.

Lussier, R. N., & Achua, C. F. (2007). *Leadership: Theory application, skill development* (3rd Ed.). Mason, OH: Thomson South-Western.

Maehr, M. L. (2008). Culture and achievement motivation, *International Journal of Psychology*, 43(5), 917-918.

Maheswari, K.K. & Aruna, M. (2016), Gender difference and achievement motivation among adolescent school students. *International Journal of Applied Research (IJAR), 2(1), 149- 152.*

Mahyuddin, R., Elias, H., & Noordin, N. (2009). Emotional intelligence, achievement motivation and academic achievement among students of the public and private

higher institutions. *The International Journal of Diversity in Organizations, Communities and Nations, 9*(4), 135-144.

Malone, T. W., & Lepper, M. R. (1987). Making learning fun: A taxonomy of intrinsic motivations for learning. *Developmental Review*, 14, 361-384.

Mangal, S.K (2013), *Essentials of Educational Psychology.* New Delhi, PHI Learning Private Limited.

Marsh, H. (1992). *The content specificity of relations between academic self- concept and achievement:* An extension of the Marsh/Shavelson model.

Marsh, H. W. (1990). The structure of academic self-concept: The Marsh/Shavelson model. *Journal of Educational Psychology*, 82, 623-636

Marsh, H. W., & Craven, R. G. (1997). *Academic self-concept: Beyond the dustbowl. In G. Phye (Ed.), Handbook of classroom assessment: Learning, achievement and adjustment*.in US: Academic Press. Orlando, FL: Academic Press. 131–198.

Mateo J.M. (2007), Inverted U-shaped relationship between cortisol and learning in ground Squirrels. *Journal of Neurobiology of learning and memory (online). www.neurobio.learn.mem.com retrieved 18 September, 2016.*

Mayers, D. (2004). Psychology. (7th Ed.). Worth Publishers. New York.

McClelland, D. & Alschuler, A. (1971*). Achievement motivation development project, final report.* Cambridge, M.A: Harvard University. (ERIC Document Reproduction Service Number ED 062585).

McClelland, D. (1968). *Achievement motivation training for potential high school dropouts.* Cambridge, M.A: Harvard University. (ERIC Document Reproduction Service Number ED 029067).

McClelland, D. C. (1958). Methods of measuring human motivation. In J. W. Atkinson (Ed.), *Motives in fantasy, action, and society*, Princeton, NJ: D. Van Nostrand Company, Inc. 7-42.

McClelland, D. C. (1985). *Human motivation*. Chicago:Scott Foresman. www.ccsenet.org/ies

McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1958). A scoring manual for the achievement motive. In J. W. Atkinson (Ed.), *Motives in fantasy, action, and society*, Princeton, NJ: D. Van Nostrand Company, Inc. 179-204.

McClelland, D.C. & Winter, D.G. (1969). *Motivating economic achievement*. New York: Free Press.

McClelland, D.C. (1961). *The achieving society*. Princeton, New Jersey: Van Nostrand.

McInerney, D.M. (1997). *Relationship between motivational goals, sense of self, self-concept and academic achievement for Aboriginal students.* 10th Annual Aboriginal Studies Association Conference, University of Western Sydney, Banks town Campus, Milperra, 12-14, July 2000.

McInerney. D. M. & Sinclair, K. E. (1991). Cross cultural model testing: Inventory of school motivation. *Educational and Psychological Measurement, 51, 123-133*.

Meece, J. L., Wigfield, A., & Eccles, J. S. (1990). Predictors of math anxiety and its consequences for Young adolescents' course enrolment intentions and performance in mathematics. *Journal of Educational Psychology, 82, 60- 70.*

Mohammed, I. (2016), *Relationship among achievement motivation, self-efficacy and academic achievement of NCE students of colleges of education in Kaduna state.* Unpublished ABU M.Ed. Dissertation.

Muola, J. M. (2010). A study of the relationship between academic achievement motivation and home Environment among Standard Eight Pupils, *Educational Research and Review, 5(5), 213- 217.*

Muthee J.M. and Immanuel T. (2009). *Predictors of Academic Performance and motivation among Kenyan Adolescent: A study among standard VIII pupils of Nairobi province.*

Niebuhr, K. (1995). *The effect of motivation on the relationship of school climate, family environment, and student characteristics to academic achievement (*Report N0. EA

027467*).*East Lansing, MI: National Centre for Research on Teacher Learning. (ERIC Document Reproduction Service N0. EA 393202).

Noar, S. M., Anderman, E. M., Zimmerman, R. S. & Cupp, P. K. (2005*).* Fostering achievement motivation in health education, *Journal of Psychology & Human Sexuality, 16(4), 59-76.*

Ogunkola, B.J. (1997): Instructor expressiveness, students' locus of control and cognitive entry behaviour as a measure of students' achievement in and attitude towards Biology. Unpublished Ph. D Thesis. Institute of Education, University of Ibadan. *European Journal of Educational Studies, 3(2), 201- 216.*

Okoye, N.N. (1985). *The Psychology of Motivation.* Adebara Publishers Limited, Ibadan, Nigeria.

Olaboopo, J.O. (1999): *Effect of Error Treatment, Model-based and Skill-based Instructional Strategies on Attitude,Motivation and Achievement in English Language in Secondary Schools in Ibadan*. Unpublished Ph.D. Thesis.

Oladele, J.O. (1989*), Fundamental of psychology of education. 5th Ed.,* Lagos, John Lad publishers. http://en.wikipedia.org.wiki/motivation,achievementmotivationretrieved 2nd December, 2016.

Olajide, J.L. (2008): Some correlates of polytechnic prelim students' achievement in English. *Journal of Educational Achievement. 5(3).*

Olatunde P. (2010). Student's self- concept and mathematics achievement in some secondary schools in south western Nigeria. *European Journal of Social Sciences, 13(1).*

Ommundsen, Y., Haugen, R., & Lund, T. (2005). Academic self-concept, implicit theories of ability, and self-regulation strategies, *Scandinavian Journal of Educational Research*, 49(5), 461-474.

Omran, J. R. (1995). *The relation between motivation, academic achievement and other demographic factors for a sample of primary and middle students in Bahrain, human fields studies*, Jordan University, Ammn, Jordan.

Onete, O. U., Edet, P. B., Udey, F. U., & Ogbor, B. P. (2012). Academic performance: A function of achievement motivation among education students of cross River University of technology, Calabar. *Review of Higher Education in Africa, 4*, 63-83.

Onosode, T.T. (2003): *Process writing approach, locus of control and gender as determinants of achievement in english language written composition among primary 5 pupils.* Ph.D. Thesis. Institute of Education. University of Ibadan.

Onuka, A.O.U & Durowoju, E.O. (2010): Management manpower preparation: motivation and gender as correlates of cognitive achievement in junior secondary business studies in Akinyele Local Government, Oyo State, Nigeria. *A paper presentation at the International Conference of Institute of Education, University of Ibadan.*

Onuka, A.O.U. (2006): Nigerian Management Manpower Development in the Context of Globalization. In *International Journal of African America African Studies. 5(1). 17-28.*

Payne, D. E., & Mussen, P. H. (1956). Parent-child relations and father identification among adolescent boys. *Journal of Abnormal and Social Psychology, 52, 358-362.*

Petri, H. and Govern, J (2004). *Motivation: Theory: Research and Applications.* Australia: Thomson Wadsworth.

Pettinger, R. (1996). *An introduction to organizational behaviour (Macmillan business).* Palgrave Macmillan.

Pilot, D. F. & Beck, C. T. (2010). Qualitative Research Critique. Retrieved on August 15, 2016 from http://www.studymode.com/essays/Qualitative-Research-Crique

Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Merrill Prentice Hall.

Pokay, P. and Blumenfeld, A. (1990). Predicting achievement of early and late in the Semester: The role of motivation and use of learning strategies, *Journal of Educational Psychology, 82(1), 41- 50.*

Pouratashi, M., Rezvanfar, A., & Mokhtarnia, M. (2013). Analysis of factors influencing achievement motivation of agricultural faculty members. *The European Journal of Social and Behavioural Sciences*, 624-631.

Quist, H.O. (2003). *Secondary education- A tool for National development in Ghana.* A critical Appraisal of the Post-Colonial Context. African Development, 3(3&4), 188-191.

Raju S.S (2013). Impact of self-concept on scholastic achievement of 9th class students in physical sciences: *IOSR Journal of Humanities and European Journal of Research and Reflection in Educational Sciences* Vol. 2 No. 2, 2014 *ISSN 2056-5852* Progressive Academic Publishing Page 37 *Social Science (IOSR-JHSS)* 9(5), 129-133 www.idpublications.org

Rana, R.A. and Iqbal, Z.F. (2005). Effect of students' self-concept and gender on academic achievement in science. *Bulletin of Education and Research, 27(2), 19-36.*

Rohde, T. E., & Thompson, L. A. (2007). Predicting academic performance with cognitive ability. *Intelligence, 35*, 83-92.

Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources Boggiano, A. K., Shields, A., P. (1992). *Helpless deficits in students: the role of motivational orientation.* Motivation and Emotion. 16(3), 271- 296.

Ryan, R. M. (1992). Agency and organization: Intrinsic motivation, autonomy, and the self in psychological development. In Jacobs (Ed.), *Nebraska Symposium on Motivation.* Lincoln, Ne: University of Nebraska Press. *40, 1-56*

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist. 55, 68-78.*

Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical prespective. In R.M Ryan & E.L. Deci (Eds.), *Handbook of self-determination research (3-33).* New York: The University of Rochester Press.

Ryan, R.M., & Deci, E.L. (2000). *Intrinsic and extrinsic motivations: classic definitions and new directions.* Contemporary Educational Psychology, 25, 54-67.

Sandra, D. (2002): Mathematics and Science achievement: effects of motivation, interest and academic engagement. *Journal of Educational Research.*

Shaughnessy, J., Zechmeister, E. & Jeanne, Z. (2011). *Research methods in psychology* (9thEd.). New York, NY: McGraw Hill. 161-157.

Shavelson R. J. & Bolus R. (1982). Self-concept: The Interplay of Theory and Method. *Journal of Educational Psychology 74, 3-17*

Shekhar, S., & Devi, R. (2012). Achievement motivation across gender and different academic majors. *Journal of Educational and Developmental Psychology, 2*(2), 105 110.

Shkullaku R. (2013). The relationship between self- efficacy and academic performance in the context of gender among Albanian Students. *Journal of European Academic Research (JEAR). I, 467- 478.*

Siana, G. Ligthbody, P., Stock, R. & Walsh, D. (1998): Motivation and attribution at secondary Schools: The role of ethnic group and gender education. 8(3), 26 – 274.

Sikhwari T.D. (2014): A study of the relationship between motivation self- concept and academic achievement of students at a University of Limpopo Province, South Africa. *International Journal of Educational Science, 6(1), 19-25.*

Singh, K. (2011). Study of achievement motivation in relation to academic achievement of students. *International Journal of Educational Planning and Administration. 2(2), 161-171.*

Skaalvik, E. M., Skaalvik, S. (2006*). Self-concept and self-efficacy in Mathematics: Relation with Mathematics Motivation and Achievement.* Proceedings of the International Conference on Learning Science, Bloomington, Indiana. Available at: http://www.findartcles.com retrieved on 28/09/2016.

Skaalvik, S. & Skaalvik, E.M. (2004): Gender difference in math and verbal self- concept, performance exceptions and motivation. sex role: *A journal of Research.*

Smith, G. T., McCarthy, D. M., & Anderson, K. G. (2000). On the sins of short-form development. *Psychological Assessment*, *12*, 102–111.

Smith, R. L. (2011). *Achievement motivation training: An evidence-based approach to enhancing performance. Studies in Higher Education*, 20: 1, 19-26, Retrieved from http://counselingoutfitters.com/vistas/vistas11/Article_xx.pdf

Sullivan, A. (2009) Academic self-concept, gender and single-sex schooling, *British Educational Research Journal*, 35: 2, 259-288

Täht, K. & Must, O. (2010). *Are the links between academic achievement and learning motivation similar in five neighbouring countries? Trames, 3, 271- 281.*

Tella, A. (2003): Motivation and Academic Achievement in Mathematics.

Tella, A. (2007). The impact of motivation on student's academic achievement and learning outcomes in mathematics among secondary school students in Nigeria. *Eurasia Journal of Mathematics, Science & Technology Education, 3(2), pp. 149-156.*

Tucker, C. M., Zayco, R. A., & Herman, K. C. (2002). Teacher and child variables as predictors of academic engagement among low-income African American Children. *Psychology in the School. 39(4), 477- 488.*

Umoinyang, I. E. (1999). *Student Socio-Psychological Factors as determinants of achievement in senior secondary mathematics.* Unpublished Ph.D. Thesis, University of Ibadan, Ibadan. . Retrieved on August 15, 2016 from http://www.studymode.com/essays.htlm.

Wang, J., & Lin, E. (2008). An Alternative Interpretation of the Relationship between Self -Concept and Mathematics Achievement: Comparison of Chinese and US Students as a Context, *Evaluation & Research in Education*, 21(3), 154-174.

Weiner, B. (1986). *An attributional theory of motivation and emotion.* New York: Springer Verlag.

Weiner, B., (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92, 548-573.*

Wentzel, K. R. (1998): Social Relationship and Motivation in Middle School. The Role of Parents, Teachers and Peers. *British Journal of Education Psychology 68(2) 35 -43.*

Wigfield, A. (1994). Expectancy-value theory of achievement motivation: A developmental perspective. *Educational Psychology Review, 6, 49-78.*

Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review, 12,* 1-46.

Wigfield, A., & Eccles, J. S. (2000). *Expectancy-value theory of achievement motivation.*

Wigfield, A., & Wentzel, K. R. (2007). Introduction to motivation at school: Interventions that work. *Educational Psychologist, 42*, 191-196.

Wigfield, A., Eccles, J. S., & Roeser, R. (1998, August). *Relations of young children's ability related beliefs to their subjective task values, performance and effort.* A paper presented as part of and invited symposium entitled "Motivation and effect in the classroom. Retrieved on August 15, 2016 from http://www.studymode.com/essays.htlm.

Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R., & Davis-Kean, P. (2006). Development of achievement motivation. In W. Damon & N. Eisenberg (Eds), *Handbook of child psychology* (6th ed., 3, 933- 1002). New York, NY: Wiley.

Wilkins, N. J. (2006). *Why try? Achievement motivation and perceived academic climate among latino youth.* Unpublished Master's Thesis. Georgia State University. Retrieved October 9, 2016, from www.http//:findarticles.com

Wood, R. & Bandura, A. (1989). Social cognitive theory of organizational management. *Academic Management Review, 14, 361- 384.*

Woolfolk, A., E., (1993). Educational Psychology, Needham Heights, MA: Allyn and Bacon.

Woollfolk, A. (2004). *Educational psychology*. Boston, MA: Allyn & Bacon.

Yoloye, E. A. (1976). *Causes of Poor Academic Performance in Northern Nigeria. A Monograph*. Institute of Education, University of Ibadan, Ibadan.

Zanobini, M., & Usai, M. C. (2002). Domain-specific Self-concept and Achievement Motivation in the Transition from Primary to Low Middle School, *Educational Psychology*, 22(2), 203-17.

Zechneister, J. (2012). *Research Methods in Psychology* (6th Ed.). boston Mc-Graw-Hill. xvi, 543.

Zeidan, A. & Abdul M. (1989). The relation between motivation, academic achievement and students' tendency towards mathematics subject, *Gulf Magazine,* 29, Year 9: 45-55.

Zenzen, T. G. (2002). *Achievement Motivation: A Research Paper submitted in partial fulfilment of the requirement for the masters of Science degree university of Wincon ston-stonome nomonle.*

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: therole of self- efficacy beliefs and personal goal-setting. *American Educational Research Journal,* 29, 663- 676.

Appendix A: Achievement Motivation Inventory Questionnaire

Department Educational Psychology & Counselling,
Faculty of Education,
Ahmadu Bello University, Zaria
Date: 15th November, 2017

Dear respondent,

RELATIONSHIP BETWEEN ACHIEVEMENT MOTIVATION AND ACADEMIC PERFORMANCE OF SCIENCE SENIOR SECONDARY SCHOOL STUDENTS IN KANO, KANO STATE, NIGERIA

The researcher is a Post Graduate (M.Ed.) student of the above named Department in Ahmadu Bello University, Zaria who is currently conducting a researcher on "Relationship between Achievement Motivation & Academic Performance among Science Senior Secondary Schools Students in Kano State". The study is in partial fulfilment of the requirement for the award of Master's Degree in Educational Psychology.

I would be delighted if you could respond to the questions freely and objectively. I wish to assure you that any information obtained from you would be treated as confidential and would only be used for the purpose of this study.

Thank you for your cooperation

Yours faithfully



Tukur Abdullahi Yanoko
P14EDPC8032

Instructions

Please note that the question below is strictly going to be used for the purpose of this research. For this reason, do not indicate your name. This questionnaire is divided into two sections, Section A; Bio Data, Section B; Achievement Motivation Inventory Questionnaire. In each of the section list of questions are provided with corresponding boxes. Simple tick (v) the appropriate box that represents your feelings. The following options are orderly provided: Completely Agree (C.A.), Mostly Agree (M.A.), and Agree to Some Extent (A.S.E.), Mostly Disagree (M.D.), and Completely Disagree (C.D.).

Section 'A': Bio-Data

1. **Gender** : Male ☐ Female ☐
2. **Name: -** ID N0. 1

Section 'B': Achievement Motivation Inventory Questionnaire (AMIQ)

N0.		C.A	M.A	A.S.E	M.D	C.D
1.	I feel I am a lazy person.					
2.	Days often go by without me having done a thing.					
3.	I like reading the biography of great people in order to learn how they overcome hurdles and achieved great things in life.					
4.	I plan ahead what subjects to study during my free time.					
5.	When I come to know that somebody like me, have achieved something great, I am motivated to do the something in a better way.					
6.	Most people who know me say that I am hard working and ambitious.					
7.	I go on postponing what should be studying today.					
8.	I take a lot of time to get started on the task of study.					
9.	Most evenings I kick back and relax rather than prepare for the next day's school work.					
10.	Sometimes, I forget to do my homework.					
11.	I never leave a task/ assignment I start unfinished.					
12.	I enjoy working with people who score at my level or lower, rather than with those who are smarter					

	and more hardworking than me.					
13.	I dislike failing in my school examination due to unpreparedness.					
14.	I always work very hard to be among the best students in my school.					
15.	I find myself just taking life as it comes without planning.					
16.	I aim at reaching the highest level in Education.					
17.	When I grow up, I want to do something which others have not done.					
18.	I am basically a competitive person and I compete just for the sake of competing.					
19.	I believe that success in life has less to do with hard work and more to do with luck and being in the right place at the right time.					
20.	I enjoy reading all kinds of books including those that are not part of our school syllabus.					
21.	I shall be satisfied with an average performance, even though it may not be my best.					
22.	I prefer to use my time for doing something else rather than trying to perfect something that I have already completed.					
23.	I enjoy spending most of my time alone concentrating on my school work.					
24.	I always try to stand out from the rest of my class in one way or the other.					
25.	I will go ahead with my plans only if I am sure that other people will approve of it.					
26.	I get restless and annoyed when I feel I am wasting time.					
27.	It is not good idea to be always above others in achievement, because that may make them feel bad about themselves.					
28.	I like to be the best student in my class.					

29.	I enjoy finishing my school assignments even when they are difficult and time consuming.					
30.	I enjoy making friends with the most intelligent student in my class so as to keep up my standards of performances.					
31.	I like when people say in front of others that I am doing well in school.					
32.	I would like to deal with difficult situations, so that the blame or praise for its results come to me alone.					

Adapted from Muthee J.M. & Thomas I., (2009).

Key

Items for Needs: 5,6,7,9,14,15,17,25,28,30,31= 11 Items

Items for Drives: 1, 4,8,11,19,20,22,26,27,29 = 10 Items

Items for Motives: 2,3,10,12,13,16,18,21,23,24,32 = 11 Items

Appendix B: Academic Performance Test in Biology

ACADEMIC PERFORMANCE TEST IN BIOLOGYA (APTB)

1. **Gender** : Male ☐ Female ☐
2. **Name: -** ID N0. 1
3. **Measure of Performance**

SUBJECT	TEST IN PERCENTAGES
BIOLOGY	
TOTAL MARKS	_____%

Instructions:

"Each question is followed by four (4) options lettered A to D. Find out the correct option for each question & shade in pencil on your answer sheet attached to your questionnaire at the back, The answer space which bear the same letter as the option you have chosen. Give only one answer to each question". Do not leave any question unanswered.

All your responses will be kept confidential and used only for research purposes.

Think carefully before you shade the answer spaces; erase completely any answer you wish to change.

1. Biology is a science that deal with the study of……
   A. Animals only B. Living things C. Plants only D. Human beings
2. Which of the following is NOT a characteristics of living things?
   A. Expansion B. Feeding C. Growth D. Reproduction
3. The basic unit of classification is the ……
   A. Class B. Genus C. Kingdom D. Species
4. Which of these organisms exist as a colony?
   A. Amoeba B. Euglena C. Spirogyra D. Volvox
5. The excretory structure in Earthworm is called……..
   A. Anus B. Flame-cells C. Kidney D. Nephiridia
6. Which of these animals is an invertebrate?
   A. Lizard B. Rat C. Starfish D. Tilapiafish
7. The breaking down of food in the alimentary canal is called…….
   A. Digestion B. Egestion C. Ingestion D. Mastication

8. Which of the following is the end product of digestion of oil?
   A. Amino acid B. Glucose C. Glycerol D. Maltose
9. The coiled mouthpart of a butterfly is called……..
   A. Labrum B. Proboscis C. Palps D. Stylet
10. The removal of undigested food substances from the body is called……
   A. Assimilation B. Egestion C. Elimination D. Excretion
11. Which of the following structures produces the greatest variety of digestive enzymes?
   A. Salivary glands B. Pancreas C. Stomach D. Colon
12. Which of the following enzymes is active in the duodenum?
   A. Pepsin B. Renin C. Trypsin D. Amylase
13. Competition among individuals of a population increases the…….
   A. No. of organisms B. Survival of the fittest C. Availability of nutrient supplied
   D. Enlargement of the territory
14. The major pollutant around airport residential areas is……
   A. Oil spillage B. Soot C. Noise D. Dust
15. The highest level of ecological organization is the……
   A. Ecosystem B. Population C. Biosphere D. Niche
16. The enzymes responsible for the breakdown of proteins to polypeptides is……
   A. Lipase B. Ptylin C. Trypsin D. Renin
17. Asexual reproduction in spirogyra is mostly by……
   A. Fragmentation B. Budding C. Conjugation D. Binary fission
18. Which of the following organisms is well adapted for fluid feeding?
   A. Cockroach B. Mosquito C. Grasshopper D. Ants
19. The mangrove swamp in Nigeria is restricted to the……
   A. Sahel savanna B. Sudan savanna C. Guinea savanna D.Tropical rainforest
20. The branch of biology that deals with the principles of classification of organisms is called……..
   A. Biological index B. Nomenclature C. Taxonomy D. Ecology

Source: Self constructed test from Biology Curriculum SS I AND II

MARKING SCHEME FOR ACADEMIC PERFORMANCE TEST IN BIOLOGY

(APTB)

1. B
2. A
3. D
4. D
5. D
6. C
7. A
8. C
9. B
10. B
11. C
12. Bonus
13. B
14. C
15. A
16. B
17. D
18. B
19. D
20. B

4 Marks for each correct answer, therefore the total marks is 5x20 = 100 Marks

Scoring Guide

0 - 39 % Poor Academic Performance

40 - 49% Low Academic Performance

50 - 59% Average Academic Performance

60 - 100% High Academic Performance

Appendix C: Introduction Letter

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 01/07/2016

KANO STATE SCIENCE & TECHNICAL SCHOOLS BOARD
SABUNTAR KOFA, KANO

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research project/ Thesis/Dissertation. They are therefore required to collect data for the research studies.

Most of them will need to be allowed access to certain relevant documents and some valuable information which you may have.

Please accord them all the necessary assistance.

TOPIC OF RESEARCH:

ACHIEVEMENT MOTIVATION, GENDER & ACADEMIC PERFORMANCE AMONG SCIENCE SECONDARY SCHOOL STUDENTS IN KANO STATE

Thank you for your continued cooperation.

Yours Sincerely,

21/7/2016
Research Adviser

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING A.B.U. ZARIA

Appendix D: Permission Letter

SCIENCE AND TECHNICAL SCHOOLS BOARD
KANO STATE

STSB/ADMIN/90/VOL.IV **DATE: 28th JULY, 2016**

TO,
ALL PRINCIPALS,
SCIENCE COLLEGES,
KANO STATE.

STUDENT'S RESEARCH ENQUIRIES

I am directed to write and introduce to you TUKUR ABDULLAHI YANAKO from the Department of Education Psychology & Counseling, Faculty of Education, Ahmadu Bello University, Zaria, who is currently undertaking his Degree Research thesis titled "Achievement Motivation Gender & Academic Performance Among Science College Student in Kano State."

Kindly offer him the necessary support in connection to his research work, please.

Best regards

NASIRU S. MUSA
DDPRS (RO)
FOR: EXECUTIVE SECRETRY

EDUCATE YOUR CHILD IN SCIENCE & TECHNOLOGY

Appendix E: Governors College Total Enrolment

SCIENCE AND TECHNICAL SCHOOLS'BOARD, KANO STATE

GOVERNORS COLLEGE

KANO

Address: No. 1 Ibrahim Taiwo Road, Kano

2/2/17

The HOD

Department of Educational Psychology and Counseling,

Ahmadu Bello university Zaria,

Sir,

SUBMISSION OF STUDENTS' POPULATION IN GOVERNOR'S COLLEGE, KANO

I wish to write and forward the total number of our students in ss2 in the College as{ three hundred and seventy eight students= 378}

This is for your information and further action

Thanks.

Best regard,

M.Y.Ibrahim
Principal

GOVERNOR'S COLLEGE
VICE ADMIN.
Sign.....
Date.....

Appendix F: Kano Day Science College Total Enrolment

SCIENCE AND TECHNICAL SCHOOLS BOARD, KANO STATE
KANO DAY SCIENCE COLLEGE,
P.M.B. 3147 KANO

Our Ref: _____ Your Ref: _____ Date: _____

The Head of Department,

Educational Psychology & Counselling,

Ahmadu Bello University, Zaria.

Sir,

Enrolment of SS 2 Students for 2016/2017 Academic Session

This college has a total number of SS2 students for 2016/2017 academic session to be 366

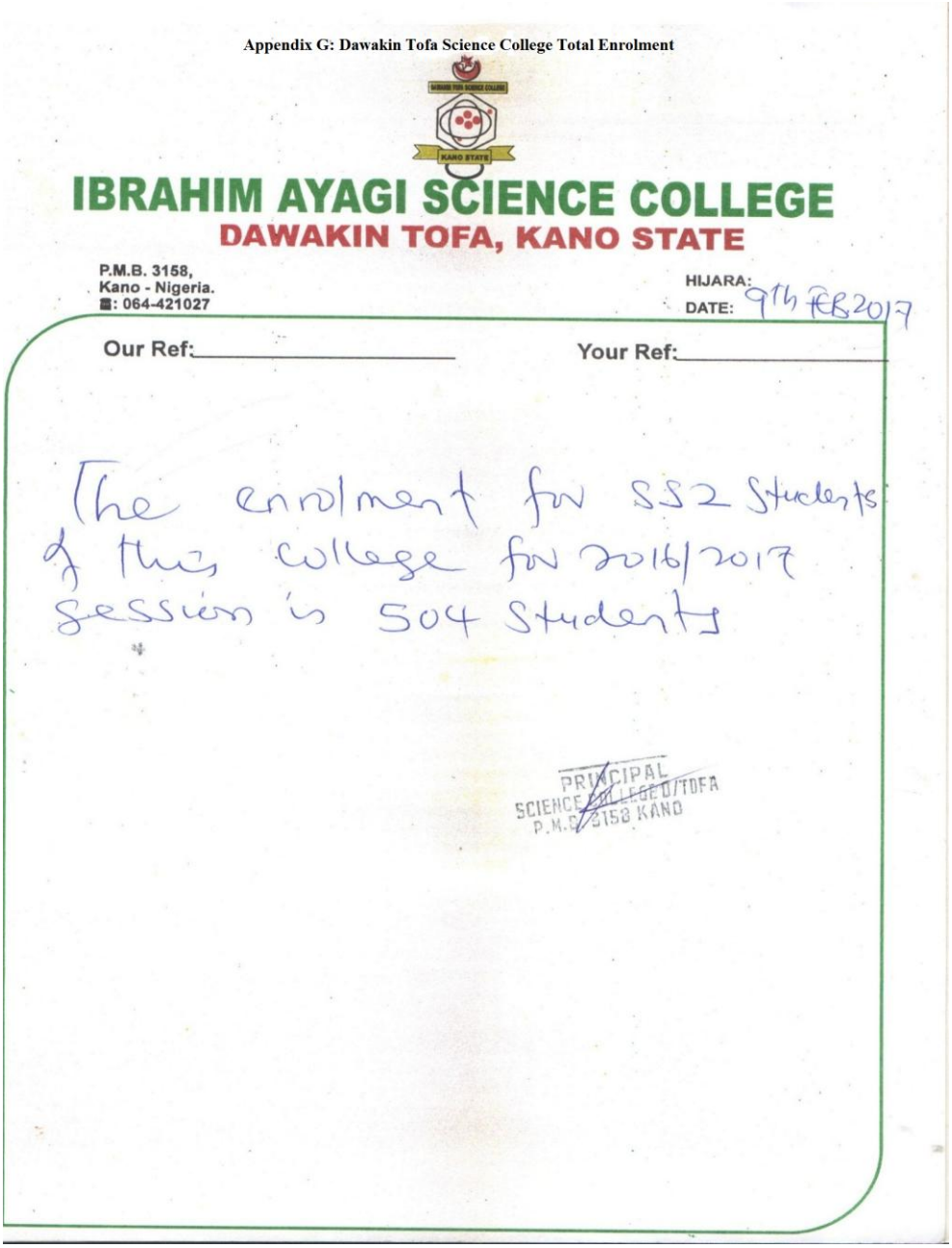
.

Best regard

KANO DAY SCIENCE COLLEGE
V.PRINCIPAL ACADEMIC
DATE 2/2/2017
SIGN
PMB 3147 KANO

Through Science we shall serve

Appendix G: Dawakin Tofa Science College Total Enrolment



IBRAHIM AYAGI SCIENCE COLLEGE
DAWAKIN TOFA, KANO STATE

P.M.B. 3158,
Kano - Nigeria.
☎: 064-421027

HIJARA:
DATE: 9th FEB 2017

Our Ref:_____ Your Ref:_____

The enrolment for SS2 Students of this college for 2016/2017 session is 504 Students

PRINCIPAL
SCIENCE COLLEGE D/TOFA
P.M.B. 3158 KANO

Appendix H: Dawakin Kudu Science College Total Enrolment

SANI BELLO SCIENCE COLLEGE, DAWAKIN KUDU
KANO STATE

☎08109233308 P.M.B. 3326, KANO NIGERIA

DATE:13TH FEBRUARY, 2017.

THE H.O.D,
DEPARTMENT OF PSYCHOLOGY
AND COUNCELLING,
AHMADU BELLO UNIVERSITY,
ZARIA.

DEAR SIR,

RE: TOTAL ENROLLMENT OF 2015/2016 ACADEMIC YEAR

I wish to write and present the total enrollment of 2015/2016 academic year, which is 484 in number and they are now in SS 2 class.

Best Regards.

Yours Faithfully,

PRINCIPAL SCIENCE COLLEGE DAWAKIN KUDU

.....

SHEHU UMAR
(PRINCIPAL)

KANO STATE

THROUGH SCIENCE WE SHALL SERVE

Appendix I: First Ladies College Kano Total Enrolment

FIRST LADIES COLLEGE KANO

ADDRESS: Mariri Rehabilitation Center (Temporary Site), kano State
Tell: 07034630740, 08034518420

YOUR REF:..... OUR REF:..... DATE: 14th February, 2017

The Head Of Department,
Educational Psychology & Counseling,
Faculty of Education,
A.B.U Zaria
Sir,

S.S 2 STUDENTS POPULATIONS

I am directed to provide the following students enrolment for the purpose of academic research work of the above named college. Below is the student's population

Class	SS 2A	SS 2B	SS 2C	SS 2D	SS 2E	SS 2F	
Population	42	42	42	44	42	42	254

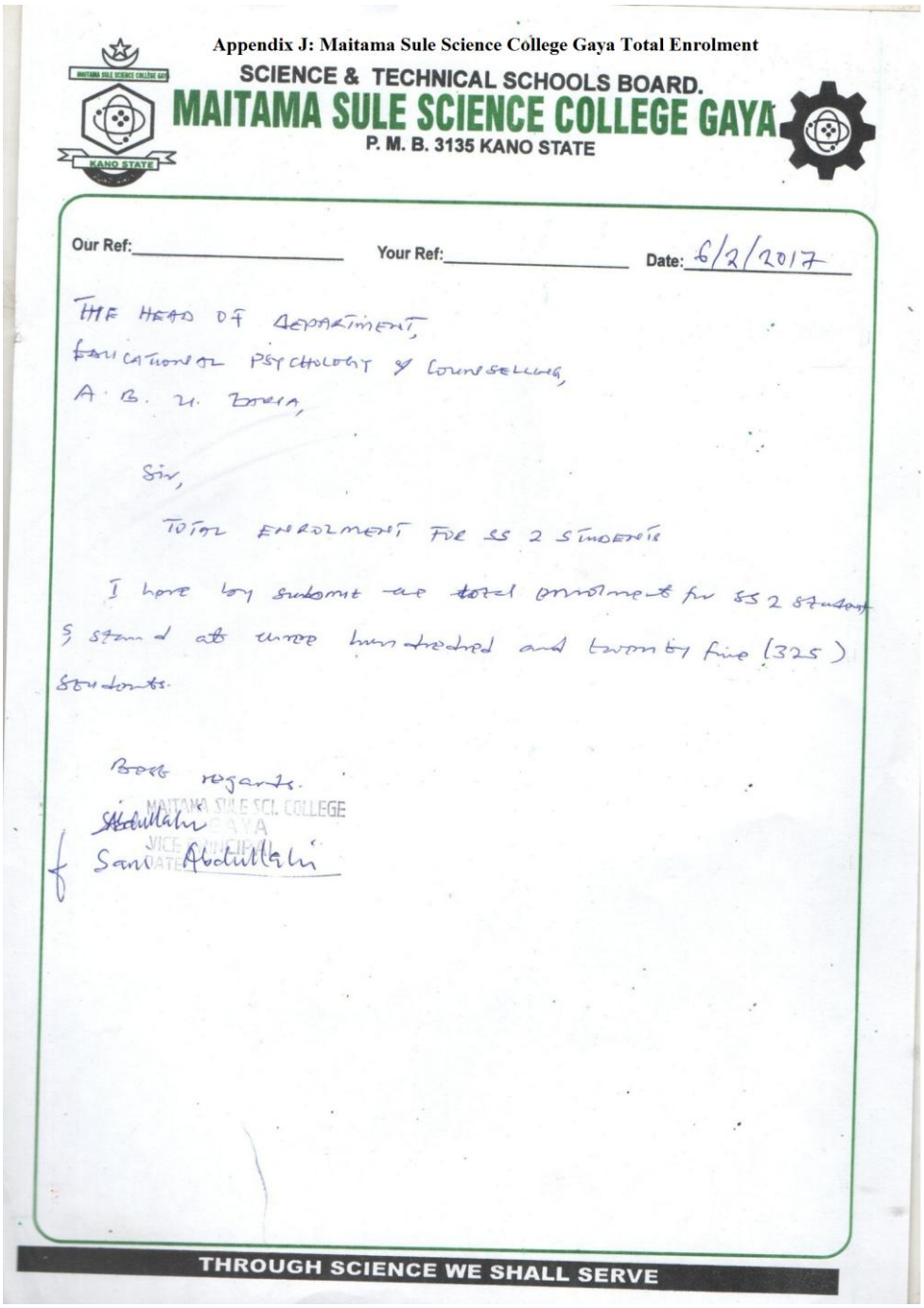
It is hope that the information will be keep confidentially please.

Best regards

VICE PRINCIPAL
FIRST LADIES COLLEGE
KANO
Date: 14/2/17 Sign: .....

Salisu Tijjani
Vice Principal Admin
For: Principal

Appendix J: Maitama Sule Science College Gaya Total Enrolment



SCIENCE & TECHNICAL SCHOOLS BOARD.

MAITAMA SULE SCIENCE COLLEGE GAYA

P. M. B. 3135 KANO STATE

Our Ref:_____ Your Ref:_____ Date: 6/2/2017

THE HEAD OF DEPARTMENT,
EDUCATIONAL PSYCHOLOGY & COUNSELLING,
A. B. U. ZARIA,

Sir,

TOTAL ENROLMENT FOR SS 2 STUDENTS

I have by submit the total enrolment for SS 2 students is stand at three hundred and twenty five (325) students.

Best regards.

Abdullahi Sani Abdullahi

MAITAMA SULE SCI. COLLEGE GAYA VICE PRINCIPAL

THROUGH SCIENCE WE SHALL SERVE

Appendix K: Girl's Science College Garko Total Enrolment

GIRLS' SCIENCE COLLEGE GARKO

P. M. B 3147 KANO STATE

Your Ref _____ Our Ref _____ Date 8/2/17

The total enrollment number of SS2 2016/2017 session - The total number is 354.

SCIENCE COLLEGE GARKO PRINCIPAL for: Mohammed E. 8/2/2017

KNOWLEDGE IS LIFE

Appendix L: Reliability Statistics of AMIQ

Reliability statistics of AMIQ

RELATIONSHIP BETWEEN THE ACHIEVEMENT MOTIVATIONS AND ACADEMIC PERFORMANCE OF SCIENCE SENIOR SECONDARY SCHOOLS STUDENTS IN KANO, KANO STATE.

Reliability of all the variables

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.744	.776	32

Item Statistics	Mean	Std. Deviation	N
I feel I am a lazy person	2.4333	1.10433	30
I plan ahead what subjects to study during my free time	2.1333	1.38298	30
I take a lot of time to get started on the task of study	4.2667	1.17248	30
I never leave a task/assignment I start unfinished	4.1000	1.26899	30
I believe success in life has less to do with hard work and more to do with luck, being in the right place at right time	4.0667	1.36289	30
I enjoy reading all types of books including those not part of the school syllabus	3.3667	1.49674	30

I prefer to use my time to something else rather than trying to perfects something that I have already completed	3.2333	1.61210	30
I get restless and annoyed when I feel I am wasting time	4.1000	1.15520	30
It is not good ideas to always to be above others in achievement because they make them feel bad about themselves	3.7667	1.59056	30
I enjoy finishing my school assignments even when they are difficult and time consuming	3.2667	1.50707	30
days often go by without me having done a thing	3.3333	1.49328	30
I like reading biography of great people in order to learn how they overcome hurdles and achieve in life	3.2000	1.80803	30
Sometimes I forget to do my homework	4.2000	1.37465	30
I enjoy working with people who score at my level or lower, rather than with those who are smarter and more hardworking than me	3.9000	1.56139	30
I dislike failing in my examinations due to unpreparedness	2.4333	1.10433	30
I aim at reaching the highest level in education	2.1333	1.38298	30
I am basically a competitive person and I compete just for the sake of competing	4.2667	1.17248	30
I shall be satisfied with an average performance, even though it may not be my best	4.1000	1.26899	30
I enjoy spending most of my time alone concentrating on my school work	4.0667	1.36289	30
I always try to stand out from the rest of my class in one way or the other	3.8333	1.39168	30
I would like to deal with difficult situations, so that the blame or praise for its results come to me alone	3.0667	1.52978	30
When I come to that someone like me, have achieved something great, I am motivated to do the something in a better way	3.2000	1.49482	30
Most people who know me say that I am hard working and ambitious	3.1667	1.39168	30
I go on postponing what should I should be studying today	2.9667	1.67091	30
Some evenings I kick back and relax rather than prepare for the next day's school work	4.2667	1.01483	30

I always work very hard to be among the best students in my school	3.8667	1.38298	30
I find myself just taking life as it comes without planning	3.9333	1.36289	30
When I grow up, I want to do something which others have not done	3.7333	1.25762	30
I will go ahead with my plans only if I m sure that other people will approve it	3.5667	1.50134	30
I like to be the best student in my class	2.4333	1.10433	30
I enjoy making friends with the most intelligent student in my class so as to keep up my standards of performances	2.1333	1.38298	30
I like when people say in front of others that I am doing well in school	4.2667	1.17248	30

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.463	2.133	4.267	2.133	2.000	.490	32

Achievement Needs motivation

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.830	.829	11

Item Statistics

neone like me, have achieved something great, I am motivated to do the something	3.2000	1.49482	30
ne say that I am hard working and ambitious	3.1667	1.39168	30
should I should be studying today	2.9667	1.67091	30
ck and relax rather than prepare for the next day's school work	4.2667	1.01483	30
o be among the best students in my school	3.8667	1.38298	30
ife as it comes without planning	3.9333	1.36289	30
o do something which others have not done	3.7333	1.25762	30
lans only if I'm sure that other people will approve it	3.5667	1.50134	30
nt in my class	2.4333	1.10433	30
ith the most intelligent student in my class so as to keep up my standards of	2.1333	1.38298	30
front of others that I am doing well in school	4.2667	1.17248	30

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.412	2.133	4.267	2.133	2.000	.496	11

Achievement Motivation Drives

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.809	.836	11

Item Statistics

	Mean	Std. Deviation	N
I feel I am a lazy person	2.4333	1.10433	30
I plan ahead what subjects to study during my free time	2.1333	1.38298	30
I take a lot of time to get started on the task of study	4.2667	1.17248	30
I never leave a task/assignment I start unfinished	4.1000	1.26899	30
I believe success in life has less to do with hard work and more to do with luck, being in the right place at right time	4.0667	1.36289	30
I enjoy reading all types of books including those not part of the school syllabus	3.3667	1.49674	30
I prefer to use my time to something else rather than trying to perfect something that I have already completed	3.2333	1.61210	30
I get restless and annoyed when I feel I am wasting time	4.1000	1.15520	30
It is not good ideas to always to be above others in achievement because they make them feel bad about themselves	3.7667	1.59056	30
I enjoy finishing my school assignment even when they are difficult and time consuming	3.2667	1.50707	30
days often go by without me having done a thing	3.3333	1.49328	30

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.461	2.133	4.267	2.133	2.000	.486	11

Achievement Motivation Motives
Reliability
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.693	.613	10

Item Statistics

	Mean	S D	N
Days often go by without me having done a thing	3.100	0.9851	30
I like reading biography of great people in order to learn how they overcome hurdles and achieve in life	3.2000	1.80803	30
Sometimes I forget to do my homework	4.2000	1.37465	30
I enjoy working with people who score at my level or lower, rather than with those who are smarter and more hardworking than me	3.9000	1.56139	30
I dislike failing in my examinations due to unpreparedness	2.4333	1.10433	30
I aim at reaching the highest level in education	2.1333	1.38298	30
I am basically a competitive person and I compete just for the sake of competing	4.2667	1.17248	30
I shall be satisfied with an average performance, even though it may not be my best	4.1000	1.26899	30
I enjoy spending most of my time alone concentrating on my school work	4.0667	1.36289	30
I always try to stand out from the rest of my class in one way or the other	3.8333	1.39168	30
I would like to deal with difficult situations, so that the blame or praise for its results come to me alone	3.0667	1.52978	30

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.520	2.133	4.267	2.133	2.000	.590	10

```
RELIABILITY
  /VARIABLES=v22 v23 v24 v25 v26 v27 v28 v29 v30 v31 v32
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE
  /SUMMARY=MEANS.
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Appendix M: RELIABILITY SCORES FOR ACADEMIC PERFORMANCE TEST IN BIOLOGY (APTB)

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.674
		N of Items	10[a]
	Part 2	Value	.764
		N of Items	10[b]
	Total N of Items		20
Correlation Between Forms			.811
Spearman-Brown Coefficient	Equal Length		.895
	Unequal Length		.895
Guttman Split-Half Coefficient			.882

a. The items are: Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, and Q10.

b. The items are: Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, and Q20.

Item-Total Statistics

APTB	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	15.7	12.079	0.096	0.854
Q2	15.47	9.982	0.812	0.809
Q3	15.43	10.53	0.636	0.821
Q4	15.7	12.355	0.018	0.858
Q5	15.27	11.926	0.262	0.839
Q6	15.27	11.582	0.412	0.833
Q7	15.47	9.982	0.812	0.809
Q8	15.2	11.407	0.7	0.825
Q9	15.43	11.633	0.258	0.843
Q10	15.13	12.671	0	0.842
Q11	15.2	11.407	0.7	0.825
Q12	15.13	12.671	0	0.842
Q13	15.2	11.407	0.7	0.825
Q14	15.13	12.671	0	0.842
Q15	15.2	11.407	0.7	0.825
Q16	15.4	11.628	0.274	0.841
Q17	15.47	9.982	0.812	0.809
Q18	15.13	12.671	0	0.842
Q19	15.13	12.671	0	0.842
Q20	15.47	9.982	0.812	0.809

Appendix N: Table for Determining Sample Size from a Given Population

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Source: Krejcie and Morgan (1970)
Note.—N = Population Size.
S = Sample Size.

Appendix O: Table of r Critical Values: Pearson Correlation

		1-tailed	
	0.05	0.025	0.005
		2-tailed	
DF	**0.1**	**0.05**	**0.01**
1	0.988	0.997	0.999
2	0.900	0.950	0.990
3	0.805	0.878	0.959
4	0.900	0.950	0.990
5	0.805	0.878	0.959
6	0.729	0.811	0.917
7	0.669	0.754	0.875
8	0.621	0.707	0.834
9	0.582	0.666	0.798
10	0.549	0.632	0.765
11	0.521	0.602	0.735
12	0.497	0.576	0.708
13	0.476	0.553	0.684
14	0.458	0.532	0.661
15	0.441	0.514	0.641
16	0.426	0.497	0.623
17	0.412	0.482	0.606
18	0.400	0.468	0.590
19	0.389	0.456	0.575
20	0.378	0.444	0.561
21	0.369	0.433	0.549
22	0.360	0.423	0.537
23	0.352	0.413	0.526
24	0.344	0.404	0.515
25	0.337	0.396	0.505
26	0.330	0.388	0.496
27	0.323	0.381	0.487
28	0.317	0.374	0.479
29	0.311	0.367	0.471
30	0.306	0.361	0.463
35	0.283	0.334	0.430
40	0.264	0.312	0.403
45	0.248	0.294	0.380
50	0.235	0.279	0.361
60	0.214	0.254	0.330
70	0.198	0.235	0.306
80	0.185	0.220	0.286
90	0.174	0.207	0.270
100	0.165	0.197	0.256
200	0.117	0.139	0.182
300	0.095	0.113	0.149
400	0.082	0.098	0.129
500	0.074	0.088	0.115
1000	0.052	0.062	0.081

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	193	63.9	63.9	63.9
	Female	109	36.1	36.1	100.0
	Total	302	100.0	100.0	

```
CORRELATIONS
 /VARIABLES=performance Needs
 /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
 /MISSING=PAIRWISE.
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Correlations

Notes

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	N of Rows in Working Data File	302
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
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Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
performance	47.6093	5.48810	302
Needs	43.3212	5.60311	302

Correlations

		Performance	Drive
performance	Pearson Correlation	1	.899**
	Sig. (2-tailed)		.003
	N	302	302
Needs	Pearson Correlation	.899**	1
	Sig. (2-tailed)	.003	
	N	302	302

**. Correlation is significant at the 0.01 level (2-tailed).

```
CORRELATIONS
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  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
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Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
performance	47.6093	5.48810	302
Motive	38.4868	5.54338	302

Correlations

		Performance	Motive
performance	Pearson Correlation	1	.931**
	Sig. (2-tailed)		.001
	N	302	302
Motive	Pearson Correlation	.931**	1
	Sig. (2-tailed)	.001	
	N	302	302

**. Correlation is significant at the 0.01 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=performance Needs
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
performance	47.6093	5.48810	302
Drives	36.8113	5.62571	302

Correlations

		Performance	Needs
performance	Pearson Correlation	1	.920**
	Sig. (2-tailed)		.002
	N	302	302
Drives	Pearson Correlation	.920**	1
	Sig. (2-tailed)	.002	
	N	302	302

**. Correlation is significant at the 0.01 level (2-tailed).

```
COMPUTE Achievement_Motivation=Drive+Motive+Needs.
EXECUTE.
RECODE Achievement Motivation (1 thru 50=1) (51 thru 100=2) (101 thru
160=3) INTO Mot_Status.
VARIABLE LABELS Mot_Status 'Motivation status'.
EXECUTE.
ONEWAY Achievement Motivation BY Mot_Status
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=SCHEFFE ALPHA (0.05).
```

One way

Descriptive

Achievement Motivation

	N	Mean	Std. Deviation	Std. Error
Low achievers	28	43.2500	7.74417	1.46351
Moderate achievers	59	90.1186	15.13398	1.97028
High achievers	215	122.4419	12.78927	.87222
Total	302	108.7848	27.69189	1.59349

ANOVA

Achievement Motivation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	180912.567	2	90456.284	541.943	.000
Within Groups	49906.443	299	166.911		

Total	230819.010	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Achievement Motivation

Scheffe

(I) Motivation status	(J) Motivation status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low achievers	Moderate achievers	-46.86864*	2.96481	.000	-54.1623	-39.5750
	High achievers	-79.19186*	2.59566	.000	-85.5773	-72.8064
Moderate achievers	Low achievers	46.86864*	2.96481	.000	39.5750	54.1623
	High achievers	-32.32322*	1.89877	.000	-36.9943	-27.6521
High achievers	Low achievers	79.19186*	2.59566	.000	72.8064	85.5773
	Moderate achievers	32.32322*	1.89877	.000	27.6521	36.9943

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Achievement Motivation

Scheffe

Motivation status	N	Subset for alpha = 0.05		
		1	2	3
Low achievers	28	43.2500		
Moderate achievers	59		90.1186	
High achievers	215			122.4419
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 52.343.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Answering Research Questions

Table 4.2.1: Responses to Items Achievement Motivation Needs.

S/No	Items	Response categories					Mean	Rank
		CA	MA	ASE	MD	CD		
1	When I come to that someone like me, have achieved something great, I am motivated to do the something in a better way	102	75	45	42	38	3.533	2
2	Most people who know me say that I am hard working and ambitious	84	89	46	38	45	3.427	4
3	I go on postponing what should I should be studying today	90	84	52	30	46	3.470	5
4	Some evenings I kick back and relax rather than prepare for the next day's school work	89	78	50	58	27	3.477	3
5	I always work very hard to be among the best students in my school	104	88	60	30	20	3.748	1
6	I find myself just taking life as it comes without planning	81	77	59	45	40	3.377	8
7	When I grow up, I want to do something which others have not done	98	68	54	31	51	3.434	7
8	I will go ahead with my plans only if I'm sure that other people will approve it	81	71	55	48	47	3.301	11
9	I like to be the best student in my class	92	66	49	41	54	3.334	10
10	I enjoy making friends with the most intelligent student in my class so as to keep up my standards of performances	91	71	44	57	39	3.391	6
11	I like when people say in front of others that I am doing well in school	88	81	36	51	46	3.377	9
	Cumulative Mean						***3.4426***	

Decision Mean =3.000

According to the table above, respondents level of Achievement for Motivation Needs is very high. This is because the calculated cumulative mean of 3.4426 is above the 3.000 decision/standard mean. For instance, most of the respondents always work very hard to be among the best students in my school and When they come to that someone like them, have achieved something great, they are motivated to do the something in a better way. In summary, their achievement for motivation needs is high, especially most always work very

hard to be among the best students in their schools and When they come to that someone like them, have achieved something great, they are motivated to do the something in a better way.

Table 4.2.2: Responses to Items Achievement Motivation Drives

S/N0	Items	Response categories					Mean	Rank
		CA	MA	ASE	MD	CD		
1	I feel I am a lazy person	99	77	34	40	52	3.434	3
2	I plan ahead what subjects to study during my free time	110	65	40	33	54	3.477	2
3	I take a lot of time to get started on the task of study	80	78	75	22	47	3.404	6
4	I never leave a task/assignment I start unfinished	95	58	67	40	42	3.411	5
5	I believe success in life has less to do with hard work and more to do with luck, being in the right place at right time	111	71	34	55	31	3.583	1
6	I enjoy reading all types of books including those not part of the school syllabus	81	69	77	29	46	3.364	7
7	I prefer to use my time to something else rather than trying to perfect something that I have already completed	99	59	64	31	49	3.424	4
8	I get restless and annoyed when I feel I am wasting time	68	88	56	28	62	3.238	10
9	It is not good ideas to always to be above others in achievement because they make them feel bad about themselves	82	73	73	31	43	3.397	8
10	I enjoy finding my school assignment even when they are difficult and time consuming	101	51	41	64	45	3.328	9
	cumulative MEAN						***3.4060***	

Decision mean = 3.00

The Respondents views on Achievement Motivation Drives showed that their overall responses is high as the cumulative mean of 3.4060 is higher than the 3.00 decision mean.

Mostly believe that success in life has less to do with hard work and more to do with luck, being in the right place at right time. In the same vein the respondents plan ahead what subjects to study during my free time, as this view ranked second.

In summary, the respondents' achievement motivation drive is high with a cumulative mean agreement of 3.4060. Particularly majority are of the view that success in life has less to do with hard work and more to do with luck, being in the right place at right time and they plan ahead what subject they should study at their free time

Table 4.2.3: Responses to Items Achievement Motivation Motives

S/No	Items	Response categories					Mean	Rank
		CA	MA	ASE	MD	CD		
1	days often go by without me having done a thing	98	66	40	58	40	3.387	9
2	I like reading biography of great people in order to learn how they overcome hurdles and achieve in life	101	65	42	38	56	3.444	1
3	Sometimes I forget to do my homework	88	78	61	30	45	3.371	4
4	I enjoy working with people who score at my level or lower, rather than with those who are smatter and more hardworking than me	90	58	70	42	42	3.272	10
5	I dislike failing in my examinations due to unpreparedness	78	77	51	41	55	3.377	5
6	I aim at reaching the highest level in education	85	69	70	31	47	3.361	6
7	I am basically a competitive person and I compete just for the sake of competing	90	65	60	38	49	3.258	11
8	I shall be satisfied with an average performance, even though it may not be my best	76	80	50	38	58	3.397	3
9	I enjoy spending most of my time alone concentrating on my school work	83	73	70	33	43	3.318	8
10	I always try to stand out from the rest of my class in one	90	51	65	57	39	3.338	7

	way or the other							
11	I would like to deal with difficult situations, so that the blame or praise for its results come to me alone	100	54	44	56	48	3.411	2
	Cumulative Mean						***3.3576***	

Decision Mean = 3.000

The respondents general achievement motive is high this is as the cumulative mean response of 3.357 is higher than the decision/standard mean of 3.000. Specifically, majority of the respondents like reading biography of great people in order to learn how they overcome hurdles and achieve in life and would like to deal with difficult situations, so that the blame or praise for its results come to them alone. In conclusion, The achievement motivation for motive is high especially majority of the respondents like reading biography of great people in order to learn how they overcome hurdles and achieve in life and would like to deal with difficult situations, so that the blame or praise for its results come to them alone.

Question Four: Is there any difference among the Highly Motivated, Moderately and Lowly Motivated Students in their overall Achievement Motivation.

Table 4.2.4: Achievement Category of the respondents

	N	Mean	Std. Deviation	Std. Error
Low achievers	28	43.2500	7.74417	1.46351
Moderate achievers	59	90.1186	15.13398	1.97028
High achievers	215	122.4419	12.78927	.87222
Total	302	108.7848	27.69189	1.59349

According to the descriptive statistics above, differences exist in the overall Achievement Motivation of respondents who are Highly, Moderately and Lowly Motivated students among Science Senior Secondary Schools Students in Kano State.

The computed statistics showed that their computed Achievement Motivations scores are 43.2500, 90.1186 and 122.4419 by students who are lowly motivated, moderately motivated

and highly motivated respectively. The higher the students are motivated, the higher their achievement motivation.