ANALYSIS OF CLASSROOM PSYCHO-SOCIAL FACTORS AS A PREDICTOR TO ACADEMIC PERFORMANCE IN UPPER BASIC SCIENCE, FUNTUA ZONE, KATSINA, NIGERIA

BY

Agnes, Cyril IKECHI
B.Sc. Ed. Integrated Science Unijos, 2014.
(P15EDSC8023)

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BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES AHMADU BELLO UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF SCIENCE EDUCATION,

FACULTY OF EDUCATION,

AHMADU BELLO UNIVERSITY,

ZARIA, NIGERIA

MARCH, 2020

DECLARATION

I declare that the work in this dissertation entitled "Analysis of Classroom Psycho-Social Factors as a predictor to Academic Performance in Upper Basic Science Funtua Zone, Katsina, Nigeria." has been written by me in the Department of Science Education, Faculty of Education, Ahmadu Bello University, Zaria, under the supervision of Professor I. A. Usman and Professor S.S. Bichi. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at any university elsewhere.

Agnes Cyril Ikechi **Date**

CERTIFICATION

This dissertation entitled "Analysis of Classroom Psycho-social Factors as a Predictor to Academic Performance in Upper Basic Science in Funtua Zone, Katsina State, Nigeria'' by Agnes Cyril Ikechi (Registration number P15EDSC8023) meets the regulation governing the award of Master's degree in science education ,Ahmadu Bello University, Zaria, and approved for its contribution to knowledge and literary presentation.

_____ _____

Prof. I.A. Usman **Date**
Chairman Supervisory Committee

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Prof. S.S. Bichi **Date**
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Prof. S. Abdullahi **Date**
Dean, School of Postgraduate Studies

DEDICATION

This research work is dedicated to God Almighty, maker of heaven and earth for seeing me through the programme and to my favorite saints: St John the Baptism, St Anthony of Padua and to St Rita of Cascia (Saint of the impossible).

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LIST OF ABBREVIATIONS

BSPT	Basic Science Performance Test
BSCEQ	Basic Science Classroom Environmental Scale Questionnaire
NERDC	Nigerian Educational and Research Development Council
IQ	Intelligent Quotient
NCE	National Council of Education
FGN	Federal Government of Nigeria
EE	Environmental Education
DAE	Drug Abuse Education
MAN	Mathematical Association of Nigeria
LEMS	Life, Energy, Matter and Society
PFLE	Population and Family Life Education
EPC	Educational Policies Commission
NEA	National Education Association
AASA	American Association of School and Administration
UBE	Universal Basic Education
SDT	Self Determination Theory
SRI-MS	Students readiness Inventory-Middle school
GED	General Education Degrees
PPMCC	Pearson Product Moment Correlation Coefficient
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariate
FI	Facility Index
DI	Discrimination Index

OPERATIONAL DEFINITION OF TERMS

The following are operational definitions of terms as used in this study.

Psychosocial factors: Are those factors relating to both the psychological and social aspects of an individual (parental influence, student-student interaction, teacher-student interaction and classroom management).

Teacher-Student Interaction: Is the process by which teacher and student engage in a reciprocal exchange of verbal or behavioral idea or opinion in the classroom; such that each of the two parties influence the others' ideas or opinions

Academic Performance: Is an outcome of educational programme that shows the extent to which a student has achieved his or her educational goal(s) after being subjected to examination or continuous assessment.

Basic Science: It is the science taught in a way that boundaries between physics, chemistry, and biology are broken down for the understanding of the students.

Classroom Management: This is a broad range of educational concept, including the physical setting, the psychological environment created through social contexts, and instructional component related to teacher characteristics and behaviors.

Physical Environment: It is a classroom management, seating, black and white board displays and the physical climate, lighting and temperature which may affect academic performance.

Psychological Classroom Management: This is the environment where learning takes place in quantifiable and perceptible characteristics. Students are engulfed by environmental information specifically; these attract students' interest, choices, support, participation that enhances mutual understanding.

Social Classroom Environment: this generates an intellectual environment where support, respect and collaborations are central. Positive educational environment are necessary to facilitate optimal adaptive student outcome, including learning, motivation, school adjustment and achievement.

Predictors: As stated in the work, predictors are social, physical and psychological classroom environment.

ABSTRACT

This study investigated classroom psycho-social factors as a predictor(s) to slow learners' academic performance in upper basic science, Funtua zone, Katsina Nigeria. A correlation research design was used. The study population comprised of all co-educational Junior secondary II Basic Science students for 2017/2018 session in Funtua education zone with a total of 5044 students. A total of three hundred (300) of Junior secondary two (JSS 2) basic Science students took part in the study. The research instruments used for data collection were, Basic Science Performance Test (BSPT), Intelligent Quotient (IQ) Test and Questionnaire. BSPT was found to have reliability co-efficient of 0.79. The research questions were answered with the used of correlation analysis to determine the extent of relationships of independent variables with dependent variables. Regression analysis was used to test the null hypotheses of the study with the significant level fixed at0.05. The findings showed that there was a significant positive relationship between classroom psychosocial factors of parental influence, teacher-students interaction and academic performance, hence the hypothesis. Based on these findings, relevant recommendations were made. A major highlight of the recommendation is that parents should promptly pay the school fees of their childr5en and also ask the children the type of friends they keep during or after school hours.

CHAPTER ONE

THE PROBLEM

1.1 Introduction

Basic Science, formally known and tagged, as 'integrated science' was originally conceived as a science subject that deals with the study of some few subjects amalgamated into one. In the context of Nigerian science, it originally included topics from Biology, Chemistry, Physics mainly and offered as general science. Later reviews have included other areas on earth sciences, geography and the solar system. The reviews particularly that of Science Teachers Association of Nigeria (Fafunwa, (2015) cited in [STAN] (1973) have attempted to integrate all aspects or topics regarded necessary for giving science foundational knowledge and training to science discipline studies in secondary schools. Basic Science in its contemporary sense is the removal of boundaries between division, subjects of science to offer science as a fundamental unity, a problem solving strategy and introduction to specific science studies. The National Council on Education (NCE) at its meeting in Ibadan in December 2005 approved a new education curriculum structure namely: Lower Basic Education Curriculum, Middle Basic Education Curriculum and Upper Basic Education Curriculum listing relevant subjects for each level.

The Federal Government of Nigeria (FGN, 2005) in her effort to transform the country accepts that we cannot do without universal education and we cannot re-order our social attitude to our country and reinvent our spirit of patriotism without inculcating in the people the right values through functional education. The FGN, therefore, convened a National Stakeholders Forum in October, 2010 to deliberate on the state of education in Nigeria. The delegates at that summit observed that too many subjects were offered at the

Basic Educational level and called for reduction. Also, many topics were repeated in many subject areas leaving them boring. Again, some of the subjects were given prominence in the curriculum just for their own sake. They were neither adapted to the needs of the learners nor crafted in the national interest. The Nigerian Educational Research and Development Council, NERDC, was directed by the NCE to review, restructure and realigned the Basic Education curriculum to reflect global best practice and contemporary national interest. After a painstaking and fruitful effort to reduce, select and harmonize the 9-year UBE curriculum of 2009, the NERDC created the subject known as Basic Science and Technology, which is an umbrella embracing the previously autonomous subject of Basic Science, Basic Technology, Physical and Health Education and Information Technology, each of which now becomes a theme under the umbrella subject called Basic Science and Technology.

This 9-year Basic Science and Technology Curriculum is the production of a re-alignment and restructuring of the revised curricula for junior secondary school Integrated Science. In selecting the contents, three major issues shaping the development of nations worldwide, and influencing the world of knowledge today were identified. These are globalization information Communication technology and entrepreneurship education. The desire of Nigeria to be identified with contemporary development worldwide, called for the infusion of relevant contents of four approved curriculum invocation in the areas of;

Environmental Education (EE)

Drug Abuse Education (DAE)

Population and Family Life Education (POP/FLE)

Sexually Transmitted Infection (STI,) including HIV/AIDS (NERDC, 2009).

Infusion of content occurred in every class 1-9. Also some introductory topics have been introduced at the lower and middle levels, while leaving the upper with purely science topics. The overall objectives of this curriculum are to enable the learners to:

Develop interest in science and technology.

Acquire basic knowledge and skills in science and technology.

Apply their scientific and technological knowledge and skills to meet societal needs.

Take advantage of the numerous career opportunities offered by science and technology.

Become prepared for further studies in science and technology. In order to achieve a holistic presentation of science and technology contents to learners, the mathematic approach to content organization was adopted. Consequently, four themes were used to cover knowledge, skills and attitudinal requirements. These are: 1. You and Environment. 2. Living and Non-Living Things. 3. You and Technology. 4. You and Energy.

At the Upper Basic Level however, theme '3' "you and technology" was changed to "Science and Development". The topics under each theme were sequenced in a spiral form beginning with the simple to the complex across the 9-years of Basic Education in order to sustain the interest of learners and promote meaningful learning. The use of guided inquiry method of teaching and learning is implied in the activities prescribed under each topic in order to promote learning by doing and skills development. The theme "Science and Development" was added to expose students to developments in science and technology alongside skills that will enable them to face challenges, make informed decisions, develop survival strategies, and learn to live effectively within the global community. The teacher is the actor in the provision of quality education. Therefore, for the effective

implementation of this curriculum, capacity building of the teacher should be ensured on a continuing basis (NERDC, 2005).

The study of Classroom environment has developed into an important field of educational research during the past 35 years. Vivid descriptions and images of schools through powerful movies and less powerful dramatizations such as Beverly Hills,(2010) cited in Sunanda & Srivastava, (2017) all attest to the centrality of the environment to the defining character of schools and Classrooms.

The Classroom is a basic structural unit of the educational system (Talton, & Simpson, 2007). It is a miniature community in which members' interest influences the behaviour of others. Hawkros and Panick (2013) describe classroom environment as the type of environment created as a result of subsequent interactions that occur in the Classroom during teaching and learning process. In the Nigeria setting the Classroom environment appears to be static, not changing with changes in time. The Classroom environment of a school is an embodiment of the physical, sociological, psychological and psychosocial conditions(Meyer, 2000). The physical Classroom environment has to do with the age of the Classroom building, colour, level of available furniture, desks and seats, ventilation, lighting, roof, ceiling and floor (Akubue, 2015). According to Akubune (2015), the sociological Classroom environment or climate is the feeling, which the teachers and the learners are able to generate in making the Classroom morale high or low. The psychological Classroom environment refers to the level of the speed of teaching, cohesiveness, distractions, interests, motivations, anxieties, confusion and difficulty of the Classroom learning activities (Haertel & Walbeg, 2014).The Psycho-social classroom environment is a type of Classroom that has to do with interactions in the Classroom.

According to Anyafulude (2016), these interactions involve; teacher and students' interactions, students and students interactions, students and instructional material interaction, and students, instructional materials and teacher interaction. It also refers to the extents the students perceive their Classroom environment and how they want it to look like. (Hong, 2013).In Nigeria Psycho-social Classroom environment, it appears that there is suppression of students by some teachers who claim to know everything, thereby giving students little or no opportunity to air their views (Nwabueze, 2016). The Psycho-social environment that students work in is very important. According to Fagbamiye, (2014), successful psycho-social environment is more likely to be a calm place rather than chaotic, to be task oriented and have an orderly climate.

Geographical location of schools Rural-Urban may bring about differences in academic performance of students depending on several factors. The potential Rural-urban difference in education is not limited to one country but rather it appears to be a global issue. Although several studies have not found any significant differences between Rural and urban studies. Monk and Haller (2012) found that students from rural schools achieved as well as students from urban schools. Ward and Morray (2015) looked at factors affecting academic performance of selected urban school students and found that those attending schools in rural areas perform as well as those in urban also Alsphaugh (2015) and Synder and West (2012) and Haller Monk and Haller (2013) in their studies failed to find any statistical significant difference between the urban and rural students.

Adewale (2012), McClerry (2015), and Downey (2010) have found, however that rural-urban differences exist. Downey (2010) found that the ACT scores of rural students were lower than urban students' scores in each of the categories of ACT in Kansas. Another

examination of students' performance in Hawai public schools made by McCleery(2005) found sub-standard achievement to be pattern in rural areas. In Nigeria, Adewale (2002) studied the effect of parasitic infection on school performance, he found that in rural community where nutritional status is relatively known and health problem are prevalent, children academic performance is greatly hindered. In other studies however students from rural schools were found to have perform better than those from urban area (Alspaugh, 2005; Alsphaugh and Harting, 2019; Haller, Monk and Tein, (2012).

Some factors could be responsible for the potential rural-urban differences. One of them could be availability of resources like books, computers, art and science supplies and course offerings. The availability of fewer resources in many rural school than those in urban areas are often related to more limited curricula for these rural schools (DeYoung and Lawrence, 2013; Hall and Barker, 2018). Barker (2012) studied high schools and reported that smaller and rural high schools and significantly fewer art, data processing, calculus, psychology, sociology and advanced placement offerings. In Nigeria, rural schools may not have facilities to study like Computer science, Fine-Art, Music and French Language.

1.1.1 Theoretical Framework

The theoretical frame work for this study is based on Vygotsky (1978) social constructivist theory of learning, which postulated that development proceed from outside to inside in the process called internalization and also emphasis on the role of environment on children intellectual development is of the view that a child learns through interaction within the environment. This implies that social rather than biological influences are paramount to intellectual development. This is in the view that child's learning occurs through

interaction with environment and this determined what the child internalized. There are many theories of learning that are relevant to this work. One of such is observational learning theory by Albert Bandura in 1965. This is one of social learning theories. The focus of the theory is social interaction. The theory strongly assumes that the learner is a member of a social group. The learner identifies the family as the first social group where learning starts; the child sees teachers and parents as a model to imitate. As the child grows, he interacts with peers, classmate. Bruner, (1968) also support this theory and move ahead to explained perception as a process by which we observed, think, feel about and issue concepts or ideas. Lawren (2006), the nature of Psycho-social secondary schools Classroom learning environment has been found to differ according to location this difference due to location may lead to students' different perception of their psychosocial Classroom in rural and urban schools, and may or may not result to difference in students' achievement in rural and urban schools. According to Murdock (2017), location influence social interaction and Classroom achievement cannot be divorced from the social fabric in which it is embedded.

From the aforementioned of the theory therefore, learning may be facilitated or retarded by classroom environment. If teachers are not aware of their role for the social and academic development of the students, then the academic performance will be affected because the environmental hypothesis state that variations in surrounding will produce predictable differences in intelligence in this study, Vygotsky (1978) social theory of learning is adapted. The study therefore investigates whether classroom psycho-social factors are predictors to academic performance in upper basic science in Funtua education zone Katsina state, Nigeria.

1.2 Statement of the Problem

There are many factors that contribute to students' success or failure, and such factors may be social, economic and psychological in nature. Several researchers (Vasilia (2011), Hawkins, Barbour and Graham, (2010)) have carried out on how to improve the academic performance of students in Basic Science, but poor academic performance still exists. Saage (2015) reported that poor teacher-students interactions are some of the factors contributing to students' low performance in basic science. Studies such as Sabitu and Nuraddeen (2010), Korir and Kipkemboi (2014) pointed out that school environment, parents and teachers are responsible for students low performance in a particular subject.

In this study students were exposed to new information during discussion with peers. They were asked to resolved ideas between prior understanding of old information and new information by peers. They share ideas and help their peers to achieve the zone of proximal development learning by a more capable peer and teacher. The teacher plays an important role as a facilitator in assisting and explaining students. Social interactions among group members were crucial in students' acquisition of new knowledge and critical thinking skills Vygyostic (1997) as well as improving academic performance.

Hence, the problem of this study therefore is, to determine whether Classroom Psycho-social factors are predictor to academic performance in Upper Basic Science in Funtua zone Katsina State, Nigeria.

1.3 Objectives of the Study

The objectives of the study are to:

i. Determine the relationship between Classroom Psycho-social factors which serves as a predictor to academic performance in Upper Basic Science in Funtua Education Zone Katsina State, Nigeria.

ii. Find out the relationship between classroom psycho social factors which serves as a predictor between male and female academic performance in upper basic science in Funtua Education Zone Katsina State, Nigeria.

iii. Determine the relationship between classroom psycho-social factors which serves as a predictor to urban and rural academic performance in Upper Basic Science in Funtua Education Zone, Katsina State, Nigeria.

iv. Find out the relationship between classroom psycho-social factors which serves as a predictor among urban and rural, male and female academic performance in Upper Basic Science in Funtua Education Zone Katsina State, Nigeria.

1.4 Research Questions

The following research questions were formulated for the study

i. What is the relationship to which classroom psycho-social factors serves as predictor to academic performance in Upper Basic Science in Funtua Education Zone Katsina State, Nigeria?

ii. What is the relationship to which classroom psychosocial factors serves as a predictor between male and female academic performance in Upper Basic Science in Funtua Education Zone Katsina State, Nigeria?

iii. What is the relationship to which classroom psychosocial factors serves as a predictor to urban and rural academic performance in Upper Basic Science in Funtua Education Zone Katsina State, Nigeria?

iv. What is the relationship of classroom psychosocial factors as predictor among urban and rural male and female academic performance in Upper Basic Science Funtua Education Zone Katsina, State, Nigeria?

1.5 Null Hypotheses

The following null hypotheses were formulated to guide this study and were tested at $P<0.05$ level of significance:

$H0_1$ There is no significant relationship between classroom psycho-social factors and academic performance in upper Basic Science in Funtua education zone Katsina, Nigeria.

$H0_2$ There is no significant predictive relationship between classroom psycho-social factors and academic performance of male and female in upper basic science in Funtua education zone Katsina, Nigeria.

$H0_3$ There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural and urban in upper basic science in Funtua education zone Katsina, Nigeria.

$H0_4$ There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural and urban male and female in upper basic science in Funtua education zone Katsina, Nigeria.

1.6 Significance of the Study

The findings of this study will hopefully uplift the standard of Basic science education in the following:

Curriculum Planners: The findings of this study will help the curriculum planners and developers on the information regarding the quality of psycho-social classroom environment in which Basic Science will be best taught in secondary schools, with a view to guiding them in recommending the ideal psychosocial environment for Basic Science, thereby in corporation it in the curriculum to enhance students' academic performance.

Basic Science Teachers and Educators: The findings of this study will provide information to the Basic Science teachers and educators on perception of classroom psychosocial factors and their academic performance in Basic Science. The work will also serve as a resource material to researchers who may be interested in the area.

The Government: The result will provide information to the government on the level of students' perception and academic performance in Basic Science in schools, knowing this will help improve the Classroom Psycho-social environment in Basic Science, by increasing educational conditions of schools that will enhance academic performance in Basic Science in Nigeria. The government, if aware of the Classroom Psycho-social factors, can make a rule for examining bodies to monitor Psycho-social environment.

The School Administrators: The school administrators will not be left out. This work will help them in the sense that they will be able to guide their teachers in creating a better Psycho-social environment. Findings of this study will also help to increase the knowledge about psychosocial Classroom environment and also guide the teachers in providing conducive learning atmosphere by arranging and organizing the classroom in a

way that the students will like. This will hopefully increase their interest and enhance their academic performance in Basic Science.

Educational Psychologists: The findings of this work will help the psychologist especially the environmental psychologist to analyze and understand the role of psycho-social factors in classroom environment.

Professional Bodies: Professional bodies like Science Teachers Association of Nigeria (STAN) and Mathematical Association of Nigeria (MAN) among others, can use the findings of this study to organize workshops and or seminars for teachers especially on how to improve classroom psycho-social environment, such that academic performance in Basic Science can be enhanced.

Researchers: coming researchers may use the outcome of this study to replicate, improve, verify falsify, replace or adopt it during their researchers. The outcome as well as the suggestion for further studies of this research may also serves as a basic for further studies.

Educational Agencies such as NERDC: the textbook writers may also use the finding to incorporate problem solving in teaching the content of their textbooks.

1.7 Scope of the Study

The aims of this study were to determine whether classroom psycho-social factors (i.e. motivation, social control, student-student interaction, teachers-student interaction and other organization in classroom environment) are predictors to academic performance in upper basic science in Funtua education zone Katsina, Nigeria. Funtua education zone was composed of three local government area, urban and rural, boys and girls, and twenty-two

juniors secondary school. The study comprised of two variables, one independent and one dependent and is only restricted to slow learners.

The study was delimited to students of public Junior Secondary schools in Funtua zone, Katsina State Nigeria. This was because, the researcher does not want to use people in external Subjects classes because, they may not have the knowledge of Basic Science or beginners because they might not have gotten enough knowledge of Basic Science as the teaching of Basic Science starts from JSS I to JSS III. As such, the researcher considers it more appropriate to use JSS 2 while considering JSS 3 students as those preparing for their JSCE examination and this may affect their participation and corporation if they are to be involve in the this research, and the content scope is the Classroom Psycho-social factors as predictors academic performance of students in Funtua Zone, Katsina State. This study looked at the psychosocial factors which include: Motivation, social control, student-student interaction, teachers-student interaction and order & organization in classroom environment.

Five factors were used because they are very important in teaching and learning of basic science. The instruments to be used for this study are: Observation, IQ Test, questionnaire and Basic Science Performance Test (BSPT). All the data collected through these instruments will be analyzed using: descriptive and inferential statistics.

1.8 Basic Assumptions

The study was base on the assumptions that:

1. Junior secondary school basic science teachers are aware of individual differences in academic performance
2. Basic Science as a subject was taught at junior secondary school level and students perceived it as hard subject.
3. Classroom as a learning environment is affected by a number of factors such as psycho-social, environment and sociological factors.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The research work investigates the analysis of classroom psycho-social factors as a predictor to academic performance in upper basic science, Funtua Zone, Katsina state, Nigeria. The essence of this chapter is to review literatures that are related to the study. The literature review is organized and presented in the following format.

2.2 Teaching of Basic Science at Junior Secondary School.

2.3 Classroom Psycho-Social Factors and Academic Performance in Basic Science.

2.3.1 Social Control and Academic Performance among Basic Science Students

2.3.2 Parental Influence and Academic Performance among Basic Science Students.

2.3.3 Teacher/Student Interaction and Academic Performance in Basic Science.

2.3.4 Class Management and Academic Performance in Basic Science.

2.3.5 Student/Student Interaction and Academic Performance in Basic Science.

2.4 Classroom Psycho-Social Factors in Rural and Urban Junior Secondary Schools

2.5 Overview of Similar Studies.

2.6 Implications of the Literature Reviewed for the Present Study.

2.2 Teaching of Basic Science at Junior Secondary School

The discipline of Science has imposed itself on everybody through Technology. This is the age of Science, we are also of Science. The Educational Policies Commission (EPC) of the National Education Association (NEA) and the American Association of School Administration (AASA) in1996 proposed that Education, “All of Education – be infused

with the spirit of Science". The series, progress in Basic Science an integrated Science Course for Junior Secondary Schools, is an exciting and innovative series which is written strictly according to the three year course that fully covers the new syllabus of the Universal Basic Education (UBE) Curriculum on Basic Science for Junior secondary Schools as designed by the Nigerian Educational Research and Development Council (NERDC) and approved by the Federal Ministry of Education. This series aims at developing students cognitive skills to build a gradual mastery of scientific skill. It also helps students realize how science as a discipline relates to our experiences in our daily lives. It lays emphasis on activities which correlate school knowledge with the student's everyday experiences. This user-friendly series presents science in such an interesting and comprehensive manner that even an average student will have no difficulty in grasping the fundamental concepts of science. This series intends to help students develop scientific attitude and love for the environment. Some of the features of the series are:

Simple and lucid language, keeping in mind the language level of the students. A graded and spiraling approach, keeping in mind the age and level of understanding of the students. Eye-catching illustrations and user-friendly layout to create an interest in the subject. Special emphasis placed on developing concepts rather than merely providing information. Practical Activities under the heading ACTIVITY to help students understand the steps involved in a process. Some interesting and knowledgeable facts provided in-between the text under the heading 'DO YOU KNOW? Key Words to aid comprehension. Summary for quick revision. Chapter-end Exercises including a variety of questions to develop logical thinking among students. It is hoped that the series will meet the requirements of

the students, teachers and parent alike. Suggestions and constructive criticism from the users for the improvement of the books are highly appreciated.

Basic science has been defined by different authors and specialists in accordance with their understanding. Olarewajo (2013) sees basic science as the combination of physics, biology, chemistry and other science related disciplines which served as a foundation for subsequent science and technology learning. According to Usman (2000), basic science emphasizes both content and process of science. It involves the development of mental, skills, acquisition of appropriate motor capabilities and the evaluation of positive attitudes. UNESCO (2001) defines Basic science as those approaches in which the concepts and principles of science are presented so as to express the fundamental unity of scientific taught and to avoid premature or undue stress in the distinction between the various scientific field. This definition emphasize that Basic science has laid no emphasis on the traditional boundaries of the various subjects. It is a course that serves as a good foundation for scientific literacy, personal growth, social relevance, process of equity and general education. This definition also shows that presentation of the course by teacher for effective comprehension requires specialized skills.

Basic science principally refers to the scientific disciplines of Physics, Chemistry, Biology and Mathematics. The principal idea behind something being labelled as Basic science is that study of basic science leads to a better understanding of natural phenomena (Sharad *et al.* 2014). It looks for "knowledge and discovery of facts" to enable one to understand an already existing phenomenon. For instance, Botany teaches you how plants grow, how plants synthesize food, why their leaves are green and so on. Physics teaches you why things fall, what produces light and so on. Mathematics teaches you what numbers are and

how they are evaluated, what equations are and how they are solved. Most of basic science related study does not look for an application that would benefit from it. This study therefore attempts to investigate whether classroom psycho-social factors are predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

2.3 Classroom Psychosocial Factors and Academic Performance in Basic Science

Psycho-social factors are viewed or defined differently by different authors. For instance, Stansfield and Rasul (2007) viewed classroom psycho-social factors as the short hand of a combination of psychological and social factors which implies that the effect of social processes are sometimes mediated through psychological. According to these authors the social factors include general factors as the level of human society connected with social structure and social processes that impinge on or affect the individual. Psychological factors on the other hand include individual-level processes and meanings that influence mental states. Theorell (2007) defined psycho-social factors as social conditions influencing individual's psychological factors and vice versa. Another way he defined psycho-social –factors is that they are those factors that represent the interplay (mutual effect) between social (environment) and psychological (individual) factors. This interplay is the core of psycho-social research.

The type of Classroom climate is dictated by the way the majority of the students perceive their experience in the class. These perceptions or experiences may be negative or positive, pleasant or unpleasant (Essumah, 2010). When the classroom climate is conducive, it is perceived by the students to be stimulating, warmth, caring, supportive, friendly, pleasant,

peaceful, sweet, encouraging and exciting and is a positive classroom psycho-social environment Awotunde (2010). In such a climate there is good morale, solidarity among the students. The students feel they belong to the class and are recognized by their mates and the teacher. They want to take part in the class activities because the communication in the class is good and encouraging. On the other hand, when the climate is not conducive, it is perceived by the students to be hostile, cold and uncaring, harsh, punitive, aloof, sarcastic, threatening, tense and unpleasant loose without direction and is a negative classroom psycho-social factors Awotunde (2010). In the sense hostile classroom children may learn out of fear for the punishment they may receive. The students do not feel free to express themselves. There is no enthusiasm to belong to the class because of the anxiety and unpleasant feelings one experiences in the class.

Psychosocial factors (PSFs), such as motivation, social control, parental influence and self-regulation, play key roles in classroom learning (Zins, 2014). Students need to be highly motivated to learn well in school, to recognize and use the social supports that can facilitate their learning, and to regulate their behaviors and manage their feelings. Some researchers have used the word “non-cognitive” as an umbrella term that includes these sorts of PSFs and other non-ability factors (for example, Duckworth, 2009; Kyllonen, 2005). For example, Duckworth’s (2009) definition of the term “non-cognitive” includes capacity and propensity dimensions when predicting achievement. Take self-control as an example, capacity indicates that self-control is “measured as the ability to delay gratification”, whereas propensity indicates that self-control is “measured by self-report or informant ratings of behavior” (Duckworth, 2009, p.279). Many psychological studies, including this one, focus on the propensity dimension, where psychological characteristics

are measured by self-report inventories. Other non-cognitive factors measured by these instruments include an individual's demographic characteristics and life history (biographical data), as well as PSFs. These PSFs include peer group influence, socio-economic status, school environment, emotional satisfaction and other factors which are influenced by educational programs and in turn influence students' educational outcomes (Heckman & Rubinstein, 2001; Kyllonen, 2005; Le, Casillas, Robbins, & Langley, 2005; Schmitt et al. 2009). However, instead of using the broad term "non-cognitive," this study and the following section focus on three specific PSFs: parental influence, student-student interaction, class management and teacher-teacher interaction,. The present study therefore attempts to examine whether classroom psycho-social factors are predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

2.3.1 Social Control and Academic Performance among Basic Science Students

The term "Social Control" in this study refers to perception their family's engagement, particularly family members' attitude regarding the value of education and their involvement in school activities, and their relationship with school personnel. It also include school safety. Social Control was first defined as the "ability of social groups or institution to make norms or norms effective" (Reiss, 2001), and this definition of social control has been used to explain delinquency as, in part, a failure of the individual to perceive or accept social controls from their environment (Hirschi, 2000; Reiss, 2001). The main idea of social control in a control theory of delinquency is that when individuals perceive expectations from and have relationships with people or social groups in the surrounding environment, they have a lower likely hood of breaking social norms (Hirschi, 2000). In particular the notion of attachment, a key element of social bonds, includes the

relationship between students and both their family members and school personnel (Hirschi, 2010; Wiatrowski, Griswold, & Roberts, 2002). Therefore from a sociological perspective, family members' attitudes towards education and their involvement in their child's education as well as the student relationship with school members are all embedded within social control and are consequently related to children's delinquent behaviors (Hirschi, 2000; Reiss, 2000).

Social Control also can be constructed as students' perception of personal and physical resources in the social environment that would support them in their learning (Robbins et al. 2009). For example, students who perceive school personnel or family members as providing higher level of support in school activities are more likely to seek out teacher and other learning resources in school. On the other hands, students who disengage from education supports social groups, such as family and school, have fewer opportunities to achieving learning goals. Further, when students perceive their as having a safe climate, they are less likely to show deviant behaviors and are more likely to engage in learning activities (Goldstein, Young, & Boyd, 2008; Sprague & Walker, 2005).

Students with social better skills and more involvement in extracurricular activities have better academic achievement, and earn higher salaries in their chosen fields (Fredricks, Blumenfeld, & Paris, 2004; Lleras, 2008). Dropouts show less engagement with school activities and tend to have estranged relationships with teachers and peers (Renzulli & Park, 2000; Rumberger & Lim, 2008). On the other hand, students who have strong relationships, with teachers and peers are more likely to attend class (Allen Worth & Easton, 2007). Also students perform better in safer schools (Creemers, 1994; Gronna & Chin-Chance, 2000). In addition to school environment, family plays an important role in

students' learning. When students perceive supports from parents, they tends to adjust better during the transition between middle school and high school (Isakson & Jarvis, 2000). Meta-analytic studies show that parents' involvement, especially parental aspirations and expectations for education, predicts academic achievement (Fan & Chen, 2001; Hill & Tyson, 2009). Also, Eamon (2005) argued that differential parenting practices might lead to sex differences in achievement. Specifically, female student might receive more rules or supervision from parents, and, in turn, perform better in school. In sum, social control – including the school personnel, school safety and family engagement in school learning – is a significant predictor of later academic achievement.

Self-regulation of behavior and emotion correlates significantly with academic achievement in middle school students. Anti-social behavior and failure to regulate their emotions are related to poor academic achievements (Fredricks et al. 2004; Gumora & Arsenio, 2002; Wentzel, 2003). Similarly Finn and Rock (2001) examine a large sample of minority, low- income students in grade 8 to 12. They found that better student were likely to engage in disruptive behaviors. These findings are consistent with other developmental studies, which describes cascading effects of students' aggressive and disruptive behavior, emotions and academic achievement (Masten et al. 2005; Moilanen, Shaw & Maxwell, 2010). Along these lines, students who displays behavior problem in childhood are more likely to have lower academic achievement in secondary school and have a higher likely hood of showing emotional problem in young adulthood (Masten et al. 2005). Male students are especially likely to demonstrate disruptive behavior (e.g., Cohn & Modecki, 2007; Zimmer-Gembeck, Geiger & Crick, 2005).

Some studies also shows that emotional problems, such as anger, sadness and depression, are mildly related to poor academic achievement in 7th and 8th grades (e.g., Fredricks et al. 2004; Roeser, Eccles & Sameroff, 2000). On the other hand, studies show that the students who could regulate impulsive behaviors were more likely to have better academic achievement (Duckworth 7 Seligman, 2005; Hair & Hampson, 2006; Spinella & Miley, 2003). Although, many studies shows linear relationships between self-regulation and academic achievement (e.g., Duckworth & Seligman, 2005; Gumora & Arsenio, 20002; Wentzel, 1993; Wolfe & Johnsonn, 1995). Robbins et al. (2006) found a curvilinear relationship between emotion regulation and GPA inn college students. That is too high or too low emotion regulation was associated with poor GPA in freshman year of college. The present study examines classroom psycho-social factors as predictors to performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria

2.3.2 Parental Influence and Academic Performance among Basic Science Students

Family is one of the fundamental factors which contribute to child development. Family is the child's first social and educational environment. In this regard therefore, parents are seen as their children's first teachers whose responsibility is to lay sound foundation for their future education. Parents have ambition for their children to achieve grate accomplishments in school. According to Hong (2012) all parent want their children to succeed at school, but not all parents are successful in facilitating this success. Nyarko (2011) and tope (2012) asserted that, to be successful in their higher education and life, however, adolescent and young adult need trusting, supporting and caring relationship with their families, especially with their parents. These types of relationships have impact on the development of children's personality traits, as well as social and academic achievements.

As is evidence from the foregoing, the importance of parental influence in the general education of their children cannot be over stated. This involvement will help in bringing the children's family closer to the school thus, enabling the children to see the relationship between the school and the home, and put more effort towards their academic success.

Parental influence has been defined in several ways. For example, Hill and Tyson (2009) are view of the view that parental influence includes the parent who provides a home environment which promotes structure and minimally aids the students during home work. Maintaining these relationships with the school proved to be essential to the students' academic success. According to Jeynes (2010), parental influences is the parental participation in the educational processes and experiences of their children. It also refers to parents' participation in activities which are related to the child's school and educational experiences. Higgins (2011) defined parental influence as how influenced student perceive their parents to be in their academic career, which include discussion about high school preparation examinations. This author opined that parents who express the importance of examinations may have an effect on the students' their overall desire to understand their school work and homework assignments. In addition to school discussions, parents who are involved with their students' personal life can affect the students completing their homework. Being involved in their children's life can possibly make parents aware of stressors such as the students not being able to understand a difficult concept being taught in class; friendships falling apart or poverty. Focusing on these stressors can prohibit one from completing tasks they have set for themselves.

Sunshine, et al (2015) defined parental influences as the activities that parents engage in at home and at school and positive attitudes parents have towards education.

Discussing on the importance of parental influence to children's education, Dwyer and Hecht in Higgins (2011), stated that the parental influence blusters or strengthens the relationship between the school, teachers, parents, and student as everyone displays an active interest in the welfare of the students' academic success. The authors added that parental influences reduce a student's potentiality to drop-out of school because they understand the amount of time their parents have invested in their success. According to Nel (2013), there are multiple benefits to a child education when his parents decided to become more involved. The author added that research studies show that the children of parents who are more involved in their schooling display higher cognitive and language skills than children whose parents lack involvement. However, Nel (2013) ascertained that lack of these parental influences is one of the biggest challenges schools face. Due to lack of support the students in achieving to the best of his or her abilities as well as managing the parents on the side. Despite the fact the parents have a significant impact on children's' academic success. Parental influences in the education of their children remain the most understated influential factor. In their study, Korir and Kipkemboi (2014) stated that it is unfortunate that many children's do not have parents who are actively involved in their lives. Must parents do not provide appropriate supervision, and are unable to clearly communicate their values. This puts these children's in an even greater danger of giving into negative peer pressure. Hence parental influences is one of the selected psychological factors to be examined in this study along with teacher-students interaction to see whether they have the potentiality of predicting students' Academic Performance in upper basic science in Funtua education zone Katsina, Nigeria.

2.3.3 Teacher/Student Interaction and Academic Performance in Basic Science

The learning environment includes the relationship between the teacher and the learner, together with the following learning environment climates; Emotional Support, both positive climate and the negative climate of the learning environment, the teacher sensitivity, regards for student's perspectives, classroom organization, behavior management, productivity, instructional learning formats, instruction support (Muntner M, 2008). The teacher is the person who directs learning. To be able to do so, he needs knowledge of subject matter, good approach to teaching (Rinwalt et al. 2009). Each learner brings his/her own kind of background to school. Such a background will be a strong factor that spaces the attitude of child towards schooling (Reeve, 2012). There should be a very good relationship between the teacher and the student. The teacher needs to be fair and firm in taking charge of his students; the teacher should make the students happy and exciting.

Bello (2010), some off the techniques a teacher uses to bring about proper classroom management for effective learning includes; - simple and clear instructions, making announcements, learning the students' name, being positive not negative cultivation of voice, always consider individual difference. A teacher should give a simple and clear instruction during classroom teaching (Paulson et al, 2008).

Teacher-student's interaction is of great importance in the development of any subject. When interaction between teacher and students is good, it might facilitate teaching and learning and this would likely lead to better accomplishment. Therefore, in order to improve the teaching and learning context of basic science, the need for teachers to create conducive environment as well positive interaction and inter relationships among teachers

and students cannot be overstated. Literature reviled that positive, strong, and supportive interactions and or relationships between teachers and students are fundamental to the healthy social and academic development of all students in schools. For instance, O'conner and Mccartney (2017) asserted that some types of classroom interactions can have a positive effect on various outcomes, including students' academic development, achievement and attitudes toward learning. Bakar, grant, and Morlock (2018) believed that most research regarding teacher-student's interaction support students' academic and social development at all levels of schooling. According to O'conner, Dearing, and Collins (2011), positive teacher-student's interaction and or relationship enable students to feel safe and secure in their learning environment, and provide scaffolding for important social and academic skills.

Several studies were carried out on teacher-students interacting in relation to students' academic performance. The finding of such studies revealed that positive teacher-student's interactions have the potential to influence a student's academic performance. For example, Murray, and Malmgren (2015) conducted an intervention study aimed at improving academic performance for law-income students via teacher-student's interaction. The result showed that students who participated in the intervention significantly improved their performance.

In addition, encouraging positive students' involvement (for example, high autonomy supportive behavior Reeve & Jang, 2006), and managing the classroom improves the students' behavioral outcomes (for example, improved ability to resist peer pressure, improved social competency) (Giles et al. 1991; Harachi et al. 2017). The Teacher/Student

interaction good outcomes deals with; mode of implementation, delivery, substance use prevention, also plays an essential role (Freiberg and Lamb, 2009).

The result also indicated that positive teacher-students interaction/relationship can improve academic performance in students as early as middle school and as late as high school (Murray, & Mamgren, 2005). Cataldi, Laird and Kewallramani (2009) investigated teacher-students' interaction for older students and found that positive teacher-students interactions are associated with positive academic performance for high school students. In a similar study, Fraser, till, Aldridge and Widia (2010) examined the influence of instructors-students interpersonal interaction on students' academic performance at the junior secondary level in Indonesia. The result of the study showed that there is a significant relationship between the instructor-students interpersonal relationship and students' academic performance.

Fotokun and Omenesa (2015) conducted a study on the effects of prior knowledge and classroom interactions on student's achievement in basic science and found that students tend to perform well in the classroom when exposed to good teacher-student's interaction. The present study seeks to analyze classroom psycho-social factors as a predictor academic performance in upper basic science in Funtua education zone Katsina, Nigeria.

2.3.4 Classroom Management and Academic Performance in Basic Science

A teacher should not start teaching when students are moving around or talking, asking a thoughtful question will make the students to settle down. It is not good for one to shout at the students. Insist on silence before commencing your teaching staring at the noise makers

may be useful. It makes them settle down and to control the noise. Sometimes, calling the name of one or two of them and "appealing" to them to let you know when they are ready. To enhance progressive academic performance of students, the school needs insurable teachers who are ready to good pattern lectures delivery (Allen & Meyer, 1994). Also for a student to be progressing in academic performance they need to be committed i.e. (Emotionally, Educationally and Normative) (Zafer Beckilogullari, 2012).

Effective classroom management by the teachers with sound qualification in the aspects of instructional methodology, likewise the method of assessment leads to students' academic successful performance (Recshly & Oliver, 2007). Emmer & Stough (2007) observes that the ability of teacher to organize classrooms and manage the behavior of their students is critical to achieving positive educational performance outcomes. But a good classroom makes good instruction possible; as a matter of fact the number one criteria in which an academic performance of a student is successful is management that serves a significant part of an effective teaching learning process to yield positive outcomes. From a student's perspective, this gives room for opportunities for students to socialize themselves while learning (James & Chilvers, 2001). According to Tsui (2003), teachers' communication skill in the classroom is usually defined as the transmission of messages that involves the shared understanding between the contexts in which the communication takes place. Interactions between the teacher and the students are within the teaching profession (Saunder & Mills, 2000). The present studies is an analysis of classroom psycho-social factors as predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

2.3.5 Student/Student Interaction and Academic Performance in Basic Science

Humans are social animals, we learn best and enjoys learning most when we learn with and for others; thus, Student/Student Interaction and Academic Performance also known as "Peer interaction" for example group shared in classroom for a particular assessment tends to achieve the main aim out of it only by peer interaction which leads to great achievement (Jacobs et al. 2002). The students' academic performance also depends on the students' age, self-concept of the students, background of the learners peer group influence together with the level of ability amidst them.

Johnson et al. (2013) observes some of the major influence that leads (from cooperate interaction) to successful academic performance of students, which are; Background "making a learning space", At times the mode of classroom furniture arrangements "bringing about comfort ability to assimilate", Start with pairs "though the same group but different tasks to enhance learning from others", Cooperative learning "thereby enriching the learning experience and promoting group effective functioning", Collaborative skills "gives the students room to be bold and even to be nominated without underrating him/her to be able to issue lecture to his/her fellows", Believing in the power of groups "helping to see a vision of what a group can achieve in encouraging to persevere", Helping students to remember successful groups "striving hard to makes sure there is trust, because it kills the weakness to success" and also Individual assessment "after working in a group, the best to do is to revise the work to test the ability of self".

In a case whereby after an assessment; the teacher should ask early finishers "intelligent" students among them to use their own mode of understanding to lecture their colleagues in an highlighted way, while completed by the teacher, because most times it gives a student

courage to meet their intelligent fellows being as peers rather to meet the teacher (Edina & Renandya, 2013). The study intends to analyze the classroom psycho-social factors as predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

2.4 Classroom Psycho-Social Factors in Rural and Urban Junior Secondary Schools

Many research has been carried out on the performance of students in urban classroom environment and semi urban classroom environments and rural classroom environment and by some researchers, trying to compare different environment and their effects on learning outcomes. Boyles, (2002) found that the urban students performed better in geography than their rural counterparts. He reasoned that the urban classroom environment with very high percentage of literate population is very conducive to the language understanding and secondly urban children were exposed to different mass media and a number of technological gadgets.

Okonkwo, (2006) investigated the relationship between some school and teacher variables and students' achievement in social studies for location, he compared urban and rural buy administering social studies achievement test and a teacher information sheet on 1148 junior secondary social studies students of 18 randomly selected schools in Edo State. He found that location of a school could affect the performance of junior secondary students in social studies. He added that if location affects students' readiness for JSS social studies, it might also affect students' readiness for JSS subjects like basic science which incorporate some aspects of geography students' curriculum and may therefore affect some aspects of geography students' curriculum and may therefore affect students' performance in junior

secondary certificate geography. The effects of location of students in Kwara State, Nigeria were investigated by Jahun, and (Momoh, 2006). Data for the study was collected in six local government areas of Kwara State, 16 secondary schools and 876 students were randomly sampled. The instruments consist of two forms of 60- item achievement test; two parallel tests of the Ahmadu Bello University achievement test (ABUMAT) which were already developed by the researcher in2001 and standardized were used as research instrument. The study tested the null hypotheses of no significant differences in performance of students located in rural and urban area in each form of the ABUMAT. The result showed that the computed p-value 0.1651 was greater than the table value at 0.05 significance levels, hence the hypothesis was retained. That is to say that location whether rural or urban does not affect performance in social studies. This finding is in line with Obioma, and Ohuchu, (2006) who reported that students in urban and rural location performed in similar manner. However Jahun in (2006), found that urban students performed better than their rural counter parts in both forms of Ahmadu Bello University social studies test.

Salau, (2004) carried an investigation on school and classroom environment as it related to students achievement in geography in Ogun State. He used a geography achievement test and a questionnaire consisting of items on teachers' factors, students' perception of geography, home environment and school were administered to a sample of 300 senior secondary school drawn from ten randomly selected secondary schools. The result revealed that the correlation between school location and achievement were found to be low. He also reported that non-significant correlation value for the school location. This showed that location of school whether rural or urban has no effect on the academic achievement

of geography in Ogun State. It implies that location of school/classroom in Ika L.G.A. of Delta State may or may not affect achievement in junior Secondary school geography. School location is a significant factor in student performance in basic Science Eze, (2003). Eze is of the view that urban students generally show high motivation in basic science than their rural counterparts. This may be because they are more exposed to many learning situation such as television, computer, libraries, modern books, extra-mural studies and so on Ugama, (2005). To support this point, Ukeje (2004) state that emphasis on education and the amount of support the schools receive vary from one location to another. He pointed out that one of the most important effects of location is the difference between their educational conditions in the urban as against that in the rural area. Parents in the rural area were on the average poorer than those in the urban areas and as such they are less capable of providing their children's classroom environment requirements.

Daramola, (2003) investigated the influence of location of schools on the knowledge of basic physic posed by SSIII student in respective schools in Kwara State; Data were collected for the study. The finding revealed that urban students obtained a mean score, which was significantly greater than that obtained by the non-urban students. Again, Daramola, (2003) sought student's opinion the behavioural patterns of their physic teachers. A 39-item behavioural test was administered on 380 from SSI students and 400 from SS2 students in urban and rural area of Kwara State. The finding reveled that urban students supported the behaviour of their physics teachers more than their rural counter parts. Aguokogbuo, (2000) investigated the influence of school location on performance in primary science. A 50-item teacher made primary school test was administered on a sample of 635 pupils in Enugu State. The results indicated that the urban pupils performed

better than their rural counterparts. (Dale, 2000) had asserted that rural pupils are academically inferior to their urban counter parts. This assertion may however be based on the general poor condition of the rural environment which include poor staffing, low socio-economic status from which the rural school children were draw as well as inadequate facilities. Also Nwagu, (2004) explored the environmental influence on the achievement of J.S.S. students from different environmental settings. The study involved 7,105 students randomly selected from J.S. Students in five educational zones of old Anambra State. A social study achievement test was administered on the students. The findings revealed that the urban-based students consistently scored higher than their rural based counterparts. This finding is at variance with the findings of Jegede, (2001) and Okeke, (2006) on the performance of urban and rural students in integrated science and geography respectively. There researchers found that rural students perform better than urban students.

Bob-manuel, (2007) investigated effect of location of schools on student's performance in River State. Data for the study was collected in five local government areas of River State, 14 secondary schools and 652 students were randomly sampled. Geography Achievement Test (GAT) was used. The result revealed that urban students drawn from River State, performed significantly better than their rural counterparts in senior school certificate examination in geography. Based on the above studies, findings on influence of location of school on academic achievement is inconclusive. This may be because of the nature of the subject or the area of study, the present of the nature of the subject or the area of student. The present study therefore wants to find out if the same result will occur in Ika local government area of Delta State. Although, students in urban and rural environment perceive their psychosocial classroom differently, this according to the researcher may be

due to the nature of classroom environment which may therefore affect their geography achievement meanwhile the literature reviewed did not say that the students in urban and rural schools perceive the geography psychosocial classroom environment differently. Also literature reviewed so not say anything on how these differences in students perceptions relate to their achievement in geography in Ika Local Government Area of Delta State thereby justifying this study.

Adeniyi, (2006) recognized the effect of the environmental variable when he quoted Piajet as saying that early childhood (3-6) years Is the period during which students are capable of learning very actively. Ajibade, (2005) said that some essential and perhaps advanced concepts in elementary geography, under favorable condition, children who have advantage of exposure to Basic science at their environment gain very rapidly the knowledge of this essential subject, Basic science quite early even before school age. A major influence that can be drawn from the above is that a stimulating environment may enhance a better student's achievement in geography. Still on environment bloom defined environmental situation as being physical, social, as well as intellectual and considered that all these formed a network of environmental forces that affect an individual. Musqrove, (2004) added that the urban location with more literate population may likely lead to a better interaction in the classroom. Obioma and Ohuche, (2006) did not find any significant difference in achievement in geography due to classroom location.

However, later findings by Obioma (2006) revealed the contrary. His study, which combined descriptive and ex-post facto research designs found out that classroom type, school location were the factors that affect or are significant. He continued by saying that students from urban schools performed significantly better than their rural counterparts.

Also, Ogu (2005) found out in a study carried out in Etiti Local Government Area of Imo State that classroom location has significant effect on the performance of SS students in their geography achievements.

Okafor & Ogbonna, (2004) carried out a study in Nsukka Local Government Area of Enugu State and found out that the relationship between the student's perceptions, and their achievement in geography was not encouraging. According to them, students' achievement in Basic science was fairly below average of 50%. Okafor & Ogbonna (2004) also found out that there was no significant difference in the achievements of students due to classroom location. Some researchers have found classroom location difference as factors affecting achievement in Basic science Barrack, (2001). He concluded that why students achieve differently in geography was because they were from different socio cultural settings and socio-economic status. They found that students from socio-cultural backgrounds and higher socio-economic status achieve higher in Basic science than those who are from poor cultural setting and low socio-economic status. This implies that students in urban schools may experience fewer difficulties than their counterparts in rural schools since according to them; it is only the parents of high economic status that can afford to send their children to urban schools. The psycho-social classroom environments within seven lower secondary social studies classes in a Jewish school were investigated. The researcher hypothesized that they would be difference between the rural and urban locations. Research methods included administration of Classroom Cultural Elements Questionnaire (CCEQ) to each class. In the students, the (CCEQ) had solicited significantly different responses from urban and rural locations. The (CCEQ) profiled attributes. Data were subject to one – way analysis of variance and effect size by

membership of eleven attributes, six were statistically significantly different due to location. The qualitative investigation of the years six classes revealed differences in the teaching resources used in urban and rural classes and differences in the behavior of the teachers and the students. The study found differences in achievements and perception in classroom location in urban and rural area. Bloom, (2004) carried out an investigation to find out the student's perception between the science classroom location and achievement.

A sample of 1888 students from 54 science classes in ten secondary school in Pakistan; completed the "what is happening in this class? (WIHIC) questionnaire. Response to two scales of the test of science related perceptions (SRP) were used as perceptional measures. Statistical analysis supported the reliability of the instruments when used in this context. Relationship between students perception of classroom environment location as assessed by (WIHIC) shows that students in urban location perceived a more positive interactions in their classrooms than their rural counterparts, he concluded by saying that students from urban location received more teacher support, they were more involved in the work in the class. He also found that there was more task orientation, competition among students of urban location. The present study seeks to analyzes classroom psycho-social factors as a predator to academic performance in upper basic science in Funtua education zone Katsina, Nigeria.

2.5 Overview of Similar Studies

Most of the studies done on Classroom Psycho-social factors were done outside Nigeria. The reviews of the related research carried out all over the world have some differences with this study.

Yakubu (2015) studied "the influence of Psycho-social factors of classroom environment on students' achievement in Physics". In secondary school in Ankpa educational zone of Kogi State, 150 students were sampled for the study from the population of 465 students. An ex-post factor research design was adopted for the study. Three instruments were used to collect data, five research questions and three hypotheses were formulated at 0.05 level of significance to guide the study. Mean and Standard Deviation were used to answer research question 1 and 3 and Pearson's product moment correlation was used to answer the research questions 1, 2, 3 and 5, while linear regression analysis was employed to test the three null hypotheses. Psycho-social classroom environment factors correlated positively with student's achievements. In senior secondary school physics, the four hypotheses was rejected, which means that there was a significant difference in student(s) achievements and perception of Psycho-social Classroom environment. The study did not examine parental influence and classroom management as part of psycho-social factors which the present study did. Also, an ex-post factor study research design was adopted for the study and in the present study correlated research design was used. Linear regression analysis was used to test the hypothesis but the present used multiple regression analysis for the hypothesis testing. This is the gap the present study intends to fill by investigating the analysis of classroom psycho-social factors of parental influence, class management, teacher student interaction, student-student interaction as predictors to academic performance in upper Basic Science in Funtua Education Zone, Katsina State, Nigeria.

Mutum (2017) conducted "The analysis of Psycho-social factors of Classroom environment as a predictor to performance of upper Basic Science students in Kaura, Kaduna, Nigeria". The population consisted of 2510 upper Basic Science students. A

sample of 340 subjects was selected by purposive random sampling technique. The instruments used for the data collection were Basic Science Performance Test (BSPT) and the Psycho-social Classroom Inventory (PSCL). Two hypotheses were formulated; the data collected were analyzed using the multiple regression approach at a significant level of $P \leq 0.05$. Data analyzed revealed that the examined Classroom Environment Psycho-social Factors were not significant predictors of students' performance. Therefore, the hypotheses were retained. The study and the present study are related; both studies used co relational research design, multiple regression analysis to test the hypothesis and correlation analysis to answer research question. The study did not examine geographical location, parental influence and classroom management as part of the psycho-social factors which the present study did. The present study investigates the Classroom Psycho-Social Factors as Predictors to Academic Performance in Upper Basic Science in Funtua Education Zone, Katsina State, Nigeria.

Herres (2009), titled "Relation between student perception of Classroom Psycho-social environment and achievement in Geography, in Ika local government area of Delta State". The study consists of 295 senior secondary school students randomly selected from the population of nine hundred and eight (908) students. The instruments used for the study are Geography Classroom Environmental Scale Questionnaire (GCESQ) and cumulative score of SSS2 Geography students were used to collect data. Mean, Standard Deviation, PPMC and Stepwise Analysis were used to answer research questions and to test hypothesis. The study reveals that the Psycho-social Classroom environment factors correlated negatively with students' achievements in senior secondary school geography. Hence there was no significant difference between student perception of the Classroom Psycho-social

environment and academic achievement. The study did not examine classroom psycho-social factors of parental influence, class management, teacher-student interaction, student-student interaction, location and academic performance. This is the gap the present study intends to fill by investigating the classroom psycho-social factors as a predictor to academic performance in upper Basic science in Funtua education zone, Katsina state, Nigeria.

Yi-lung Kuo (2011) investigated "the impact of psychosocial factors on achievement gains between eighth and tenth grade" in the University of Iowa". The study investigated the Roles of the Psychosocial Factors (PSFS) of motivation, social control, and self-regulation, in the prediction of 10th grade academic achievement for a large sample of 8th grade students. The differential effects of PSFs for male and female students with different levels of 8th grade achievement were also examined. Of the 4,660 middle-school students in the ACT database, 1,384 8th grade students were included in the study. The Student Readiness Inventory-Middle School (SRI-MS) was used to assess three broad PSFs based on ten scales, which were named motivation (consisting of Academic Discipline, Commitment to School, and Optimism), social control (consisting of Family Attitude toward Education and Family Involvement, Relationships with School Personnel, and School Safety Climate), and self-regulation (consisting of Managing Feelings, Orderly Conduct, and Thinking before Acting). The students' EXPLORE and PLAN Composite scores served as measures of initial and later academic achievement, respectively. Multiple regression models were constructed for each PSF to test the hypotheses. Post hoc probing techniques were used if significant interaction terms were found. If no significant interaction terms were found, the

effects of PSFs on achievement gains were examined using a psychosocial mediation model.

The results showed that 8th grade females demonstrated greater motivation, social control, and self-regulation than 8th grade males. Also, motivation and social control each interacted significantly with sex and 8th grade achievement when predicting 10th grade achievement. Specifically, among female students, effects were positive for males with higher prior achievement and negative for females with lower prior achievement for both motivation and social control. For male students, neither motivation nor social control added significantly to the prediction of later achievement. There were no interactions between self-regulation and either sex or prior achievement. Instead, self-regulation partially mediated the effects of initial achievement when predicting later academic achievement. The study and the present study were related in gender as a classroom psycho-social factor and they both used multiple regression analysis to test the hypothesis. The study did not examine school location, class management and academic performance which the present study did. Hence, the present study intends to fill the gap by investigating whether the classroom psycho-social factors are predictors to academic performance in upper Basic Science Funtua education zone, Katsina state, Nigeria.

Fraser and Fisher (2002) in Canada studied "The Effects of Classroom Environment on Student Performance among high school students in Califonia". The sample consisted of hundred and sixteen (116) grades and eight (8) science classes, each with a different teacher, in thirty-three (33) different schools CES and ICEQ were used to access the classroom environment. Data were analyzed in six different ways (namely, simple, multiple and arconnonical correlation analysis performed for separate posttest scores and

residual posttest scores adjusted for corresponding presence and general ability). The study reveal that the separate measures of analysis yielded consistent support for the existence of outcome environment relationship and led to no major conflict when explicating the specific forms of such relationship in terms of particular outcomes and environment dimensions. Same classroom on four of ICEQ's dimensions. From the study, it shows that students and teacher are likely to differ in the way they perceive the actual and preferred environment of the same classroom. But for the purpose of this study, the researcher wants to concentrates on students' perception of Psycho-social characteristics of the classroom environment. While the present study is analysis of classroom psycho-social factors as a predictor to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

Twum-Ampofo and Oei-owusu (2015) investigated the predictors to academic performance among senior high school (SHS) students in the Ashanti Mampong municipality of Ghana. These authors used 571 students as the sample size for the study. The study was a descriptive and correlation research design. Questionnaire was used as the instrument for data collection. The data was analyzed using Pearson correlation and regression analysis. The result revealed that parental influences, parents' academic ambition for their children, peer influence, the result also showed that parental influences, six of child's effort are the main predictors to academic performance. The present study seeks to examine whether psycho-social factors predicts students' academic performance in basic science in Funtua Education Zone Katsina, Nigeria.

Deferent researchers conducted different studies to examine the relationships between classroom psycho-social factors and academic performance. For instance, Zitzmann (2005)

investigated the relations between children's peer relationships and academic performance, using 585 participants involving children's parents and teachers of these kindergarten children. The author use interview and questionnaire to generate data for the study from the children and their teachers respectively. Multiple correlation analyzes was employed. The correlation or the result provided positive association between peer relationships and academic performance. This study failed to examine parental influences and academic self-efficacy and teacher-student's interaction as correlate of student's interest and academic performance as the present study did. Thus the present study examines s the psycho-social factors as a predictor to academic performance in Funtua education zone Katsina, Nigeria.

Onah, and Ugwu (2010) investigated factors which predict performance in secondary school physics in Ebonyi north educational zone of Ebonyi state, Nigeria. The sample size used was 220 (200 students and 20 physics teachers) participants. Questionnaires were used to collect data for the study and T-scores and F-distribution were used in testing the hypotheses. Also, step-wise multiple regression analyze were used to analyze the data on performance in relation to school location, teacher qualification, sex, interest, and laboratory facilities as predictors. The authors found that, of all the factors measured, interest and school location are the ones that had no significant effects on academic performance in physics. This study investigates analysis of classroom psycho-social factors as predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

Peter, Odoh, and Ben-Eligahu (2014) examined interest and student's academic performance in junior secondary Basic Science in Ogbadibo Local Government Area of Benue State, Nigeria. The research design adopted was descriptive survey and242 BISC

students of Junior Secondary II (SS II) were used. Interest and Sustenance BISC Questionnaire (ISCQ) was used as the research instrument. Pearson Product-Moment Correlation Coefficient (PPMCC) and t-test were used to analyze the data. The results showed that there was a significant relationship between students' interest in Basic science and their academic performance in the subject. The study adopted descriptive survey research design and T-test was used to analyse the data but the present study adopted co-relational research design and used Pearson correlation and regression analysis to analyse the data. The study did not examine the classroom psycho-social factors of parental influence, student-student interaction, teacher-student interaction, class management, the geographical location of schools and slow learners academic performance which the present study did. This present study also investigates the correlation between classroom psycho-social factors and academic performance in Upper Basic Science in Funtua Education Zone, Katsina State, Nigeria.

Essien, Akpan, and Obot (2015) conducted a study to investigate students' interest in social studies and academic performance in junior secondary school in cross Rivers State, Nigeria. The researchers adopted Ex-post-facto research design, and seven hundred and fifty three (753) NCE II students drawn from a population of 1,343 students from college of Education (COE), Akanmkpa and Federal College of Education (FCE), Obudu participated in the study. The instruments used for data collection were Students' interest in Social Studies Questionnaire (SISSQ) and Social Studies Achievement Test (SOSAT). Pearson Product-moment correlation analysis was employed in analyzing the data. The results suggested that there was a significant relationship between students' interest in social studies and

their academic performance. Essien, Akpan, and Obot (2015) study is therefore different from the present one because, it was conducted in Cross River, Nigeria, while the present study is in Katsina state, Nigeria. The sample used was 753 students while the present study used 300 students as the sample. Pearson correlation was used while in the present study multiple regression analysis was used. The study used Ex-Post-Facto research design, while the present study used correlational research design. The present study examines psycho-social factors as predictors to slow learners' academic performance in upper Basic Science in Funtua educational zone, Katsina state, Nigeria.

Olusola, Taofeek, and Olumide (2015) investigated parental influence and academic performance in agricultural science in selected secondary schools in Oyo metropolis, Oyo State, Nigeria. Correlational research design was adopted for the study. Eighty (80) students participated in the study, and structured questionnaires were used to collect data. The data collected were analysed using simple frequency percentage and chi-square. The authors found that parental influence significantly students academic performance in Agricultural science. The present study investigates psycho-social factors as predictors to academic performance in upper BISC in Funtua educational zone, Katsina state, Nigeria.

Ndirika (2009) examined the effect of teacher-students interaction on academic performance among B/SC students of different class-sizes and ability groups in Junior Secondary Schools (JSS) in Giwa Education Zone, Kaduna State, Nigeria. The author employed a nine group comparative experimental research design for the study. A sample of four hundred and eighty (480) junior secondary

school II (JSS II) students were drawn and used from the population of three thousand eight hundred and fifty JSS II students. The instruments used for data collection were Integrated Science Achievement Test (ISA-T) and Eggleston Science Teaching Observation Schedule (ESTOS). Analysis of Variance (ANOVA) and t-test were the statistical tools used in analyzing the data. The findings of the study revealed that there was a positive relationship between students teachers interact on academic performance. This study also seeks to investigate whether classroom psycho-social factors are predictors in Basic Science in upper basic Science in Funtua education zone Katsina state, Nigeria.

Javid, Babelan and Nmvar (2013) investigated the state of teacher-students verbal interaction during teacher teaching process and its relationship with academic achievement of middle school students in Ardabil, Iran. The author used seventy six thousand three hundred participants as the sample for the study (300 were middle school teachers and 76,000 were middle school students attending the classes of the selected teachers). Descriptive - correlation design was employed in the study. The data collection instruments used were documents for recording students achievement scores, factor analysis rank table, French and Galway no-verbal communication scoring system and Flanders Interaction Analysis Category System (FIACS). The researchers employed Descriptive Statistics, significance of correlation and multiple regression tests through descriptive and correlation methods. The results revealed that teachers who pays attention to students when they speak and Aare not self centered play significant role in students' academic performance. The results also showed a meaningful correlation between the ten (10) verbal interaction categories of

Flanders observed and students' academic performance. This study therefore investigates the classroom psycho-social factors as predictor(s) to academic performance in upper basic science in Funtua zone Katsina, Nigeria.

In the same vein another research was conducted by Alokan (2010), "Rural-Urban differences in students' academic performance among secondary school students in Ondo state, Nigeria". A description research design of survey type was adopted for the study. The population for the study comprised all public secondary school students in Ondo state, Nigeria. The same sample consisted of 240 students from six randomly selected schools. A questionnaire was used to collect data. Except judgment were used to ensure face and content validity. Test-retest method was used to determine the reliability of the instrument data collected were analysed using t-test. The result revealed there is no significant in the academic performance of students from rural erosion. The study did not examine the classroom psycho-social factors of slow learning academic preference in rural and urban environment. The present study intend to fill the gap by investigating the analysis of classroom psycho-social factors as predictors to academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

2.6 Implications of the Literature Reviewed for the Present Studies

This study has revealed literature on the previous work done related to classroom psycho-social factors as a predictor to academic performance in upper Basic Science. The literature reviewed has provided some insights into the effectiveness of classroom psycho-social factors on academic performance in basic Science. Most of such studies revealed mixed

results with regard to psycho-social factors, slow learners and academic performance in Basic Science. Finding from previous studies of Yakubu (2015) and Mutum (2017) have not found any significant differences between classroom psycho-social factors and academic performance, in their studies however students that have positive classroom psycho-social factors achieve higher than students with negative classroom psycho-social factors. Fraser and Fisher (2002), Joanna (2009) and Yi-lung (2011) found a significant difference between classroom psycho-social factors and academic performance.

Several studies have not found any significant difference between rural and urban school. Monk and Haller (2006) found that students from rural schools achieved as well as students from urban schools. Kleinfeld (1999) did not find that urban schools determine the quality of students' achievement. Ward and Murray (2000) look at factors affecting academic performance of students in rural and urban schools and found that those schools in rural areas performed as much as well as those in urban area. Also Alapaugh (2016), Synder and West (2012) and Haller, Monk and Tien (2015) in their studies failed to find any statistical significance difference between rural and urban students, other scholars have found, however that rural-urban differences do exist. Downey (2002), McCleery (2016), Adewale (2002) and De Young(2012) in other studies, however students from rural schools were found to have performed better than those from urban school Alspaugh, 2011, Alspaugh and Harting, 2014; Haller, Monk and Tien (2015).

The reason for gender differences in academic performance is as a result of so many factors. Research has indicated numerous evidences for mean differences among male and females' academic performance, females obtain higher grades in school in every subject but score lower than males on exams that are not related to material taught in school.

Halpern (2008) female also tend to excel in verbal abilities and have an episodic memory where they can recall information concerning previous events. Males have an advantage over females on test of verbal analogies Taylor and Graham (2007). However some African American male students appear to value school less, whereas African American females appear to value school consistently from elementary throughout middle school. While some resources conclude that biological factors may be the primary cause of gender differences, in academic performance (Meitzer, Katzir, Miller, Reddy and Roditi, 2004). Other researchers challenge the validity of their arguments.

Geist and King (2008) question the assumption that there is a biological difference between genders and continued that both sexes have natural thinking ability, which they are differently depending on their developmental levels, preferences and talents. These researchers also have concerns about how certain instructional methodologies may affect the learning of girls and boys. The findings of the study of Wwosu (2006) revealed that there was a significant difference in the academic performance of male and female students in social studies but Babelan and Nmvar (2014) could not identify any significant difference between the performances of girls and boys I their studies while Howley's 1989 concluded that the academic performance of boys and girls depends on several factors. The present study seeks to investigate the classroom psycho-social factors as a predictor to academic performance in upper Basic Science of boys and based on gender.

Several factors are responsible for academic performance of students in school. Howley (2000) found poverty and school size have a strong influence on academic achievement, both positively and negatively Walberg and Fowler, (1987) were also able to identify significant relationship between class size, socio-economic status of parent and academic

performance of students. Friedkin and Necochea (1988) in their study established that there is no significant relationship between class size and academic performance. Bickel and Howley (2000) found strong evidence of a positive indirect relationship between students from low socio-economic backgrounds attending smaller schools and academic achievement in the state of Ohio. However in Texas they found a direct relationship. They also found weak evidence in Montana, and no evidence in the state of Georgia. Only one researcher, Kennedy (1990) was found to contradict the previous studies and stated that school size had little or no effect on students' achievements. Davis-kean (2005) found a very significant relationship between parents' education and income and their children's academic performance. Acharya and Jochi (2009) also found a significant relationship between parent influences and academic performances. Students with the highest truancy rates have been found to have the lowest academic achievement and are most likely to drop out of school (Dynarski & Gleason (1999)).

Finding from previous studies have shown that most Classroom Psycho-social factors are very important in the teaching and learning of Science. The relationship between students' achievement and perception of their classroom environment depend on the Psycho-social factors of the classroom. It also shows that some students are highly satisfied with classes where factors such as, involvement task oriented, innovations, competitions are available and are dissatisfied with other factors while some students are dissatisfied with classes where the above mentioned factors are available and are satisfied with other factors in the classroom environment. Empirical studies also reveal that Psycho-social factors of classroom environment and student academic performance can be study in any subject (Chemistry, Physics, Biology, Geography, and Basic Science). Studies also reveal that,

most of the studies done on Classroom Psycho-social factors outside Nigeria, even those done in Nigeria was based only on Student Classroom Psycho-social Factors and Academic Performance.

The present research is unique because, it intends to investigate the analysis of classroom psycho-social factors as predictors to Academic Performance in Basic Science Funtua, Katsina State, Nigeria. This study tried to probe the gaps in the process of accurate, valid information on academic performance.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This study investigates classroom psychosocial factors as a predictor to academic performance in basis science. This chapter contains the research methodology employed for the study under the following sub-headings.

3.2 Research Design

This is a correlational survey research. Correlational research design seeks to establish what relationship exists between two or more variables and assess the statistical relationship. Usually, such studies indicate the direction and magnitude of the relationship between the variables. Various statistical techniques are used to estimate relationship

between variables, depending on the level of measurement attained by the variables under study. Results of such analyses are presented as correlation coefficient, which ranges from 0.00 to 1.00 (or-1.00). Positive results indicate direct relationship while negative results show inverse or indirect relationship (Olayiwola, 2010). A correlational study is a quantitative method of research in which you have two (2) or more quantitative variables from the same group of participants, and you are trying to determine, if there is a relationship between the two variables. A correlational design was used in this study because it involves measuring two variables and assessing the relationship in order to determine predictor(s) among the variables, neither one is manipulated and is true regardless of whether the variables are quantitative or categorical.

3.3 Population of the Study

The population of this study Comprises of all the government Junior Secondary School in Funtua educational zone, Katsina State Nigeria. Funtua Educational Zones Comprises of three (3) local governments and twenty-two junior secondary schools with the population of five thousand and forty-four (5044) JSS 2 Basic Science students. Government Secondary School will be used because their organizational structures, administrative structure and coeducational system of education is relatively the same and ninety nine percent (99%) of the students are indigene. The total population of this study is one thousand four hundred (1400). The description of the population is presented in Table 3.1.

Table 3.1: Population of the Study

S/No	Names of school	Male	Female	Total
1	GJSS Funtua	150	200	350
2	GJSS (M) Funtua	310		310
3	GDC(DW) Funtua	257		257
4	GGJSS Funtua		610	610
5	GDSS Dukke	70	57	127
6	GDSS T/Iya	160	107	267
7	GDJSS Maska	100	97	197
8	GDJSS Kurami	200	119	319
9	GDSS Guga	25	15	40
10	GDSS Kakumi	50	46	96
11	GDJSS Bakori	400	301	701
12	GDSS Jargaba	92	115	207
13	GGAJSS Kabomo		220	220
14	GDSS Barde	120	105	225
15	GDJSS Tsiga	200	200	400
16	GDSS Tandama	60	100	160
17	GDJSS Danja	150	150	300
18	GDJSS Dabai	100	76	176
19	GDSS Kahutu	60	16	76
20	GDSS Kokami	70	26	96
21	GDJSS L/Rama	35	16	51
22	GDSS Goya	40	19	59
	TOTAL	**2449**	**2595**	**5044**

Source: Funtua Educational Zone (2017)

3.4 Sample and Sampling Techniques

Stratified random sampling was used to draw out the sample schools. Two co-educational schools from each of the three Local Government that make up the Funtua education zone. In order not to affect the reliability of the study. Three schools were chosen from urban area and three schools were also chosen from rural area. The sample size used for this study was three hundred students from the population of one thousand and forty four, one hundred and sixty four boys (164), one hundred and thirty six girls for gender and one hundred and twenty eight students from urban area, one hundred and seventy two rural students' schools, for location. This selection was in line with Krejcie and Morgan (1970)

which gave a sample size to be selected based on the population size of the study. Simple random sampling technique will be equally adapted in selecting the subject for the study using paper-slip method. The detail is shown in Table 3.2.

Table 3.2: Sample for the study

S/No.	Name of School	Location	Male	Female	Sample Size
1.	GJSS Funtua	Urban	20	31	24
2.	GJSS Maska	Rural	42	40	39
3.	GJSS Bakori	Urban	90	86	95
4.	GJSS Tsiga	Rural	40	20	37
5.	GJSS Danja	Urban	50	40	51
6.	GJSS Dabai	Rural	50	52	54
	Total		**292**	**269**	**300**

Source: Researcher (2018)

3.5 Instrumentation

Educational research involves the collection of necessary data for solving educational problem. In order to collect data for this study, the researcher used three different types of instruments which are:

1. Observation and Intelligent Quotient (IQ) Test.
2. Basic Science Academic Performance Test (BSAPT)
3. Basic Science Classroom Environment Questionnaire (BSCEQ)

3.5.1 Observation and IQ Test

Observation and IQ Test is the first instrument used for the study to identify the slow learners. The instrument deals with on-the spot, face-face observation of students behavior during the science lesson. The instrument was developed by Eggleston, Galton and Jones (1975). In order to ensure a systematic and effective observation of the students, the researcher used rating scale instrument to observe, watch and describe the student's classroom behaviors in their natural setting. The researcher is part of the situation in which the observation is taking place so that the students will behave naturally and record all observation promptly. Intellectual capacity is measure in Intelligence Quotient (IQ). Stanford Binet test and IQ test are the only means of identifying those who could be Slow learners and Intelligent. The 1st intelligence test designed by Binet was aimed at distinguishing the bright children from the dull ones Wilheln (1960). Guilford (1964) identifies 5 major groups of intellectual abilities.

Terman (2014) adopted a convenient index of brightness by introducing the concept of Intelligent Quotient (IQ). The IQ is used to express the ratio between Mental Age and Chronological Age (C.A). The term IQ reflects a measure of brightness that takes into account both the Mental Age and Chronological Age. The formula is presented as follows;

$$IQ = \frac{\mathbf{MA}}{\mathbf{CA}} \times 100$$

Whatever Intelligence is, Intelligence test does not measure it perfectly or directly, what intelligent test do best is to measure and predict an academic performance. The test serves to identify students who are not likely to interact well with standard school activities. Psychologically, Intelligence is that which Intelligence test measures. And these are the

three categories of Intelligence which are: Academic ability, Social ability and Mechanical Intelligence. Whichever one Intelligent can be inherited or acquired. The truth is that we do not have such direct evidence which should lead us into concluding that a child's Intelligence is totally inherited or acquired.

3.5.2 Basic Science Performance Test (BSPT)

Basic Science Academic Performance Test is the second instrument used for generating data for the study. The instrument was developed by the researcher and consists of forty (40) items and each item has for options A-D in the multiple choice format. The questions were drawn from the first four topics of JS two first term syllabus, these topics are water pollution, air pollution, health science and water habitat (see table 3.3).

Table 3.3: Item Specification based on Bloom's Taxonomy of Cognitive Objectives

Topic	**Kno. 25%**	**Compe 10%**	**Appl. 10%**	**Anal 15%**	**Synth. 20%**	**Eval 20%**	**Total 100%**
Water Pollution 40%	3	1	1	3	2	2	12
Health Science 25%	2	1	1	2	1	1	8
Air Pollution 25%	1	1	1	1	1	1	6
Water Habitat 10%	1	1	1	0	0	1	4
Total	**7**	**4**	**4**	**6**	**4**	**5**	**30**

Source: Adopted from Obeka (2012)

3.5.3 Basic Science Classroom Environment Scale Questionnaire (BSCESQ)

This is a popular instrument for collecting data in educational research. The type of questionnaire that was used for this study is a fixed-response questionnaire, where the respondents were provided some alternative responses from which they selected the one that applies to their opinions, feelings or attitudes. The respondents were only restricted to those options provided in the questionnaire. It is a four points Likert type questionnaire developed by the researcher. The instrument comprises of two sections, A & B, section A focuses on the demographic information such as name of school, gender, class. Sections B consist of the instructions and the questionnaire item. Which deals with statement related to parental influence, student-student interaction, student-teacher – interaction, gender and location of schools. Thus, the instrument is made up of thirty seven (37) items/statements altogether and each four options which are strongly agree, disagree, strongly disagree, and agree. It measures the following components of the psychosocial factors of the classroom environment: The extent to which students pay attention to and show interest in the activities of the class.

The extent to which student work with and come to know each other.

The extent to which the teacher showed personal interest on the students.

The extent to which the activities of the class are centered around the Computer publishment of specified academic objectives.

The amount of emphasis on academic Computation with the class.

The emphasis within the classroom on maintenance of order and the degree to which the activities of the class are well organized.

The degree to which he rules for conduct in the classroom are explicitly stated and clearly understood.

The amount and extent of rules governing student conduct in the classroom and

The extent to which different modes of teaching and classroom interaction take place in the class (Iorchugh, 2006).

The developers of CES did not specify any particular subject, hence the researcher wish to include Basic Science as the targeted classroom environment. The four-point Likert-type rating scale was used to rate the response of the respondent to the items on the questionnaire. The mean of student scores on each of the Components was used to obtain a scale score for analysis. The range (X) of mean score that was to determine the student level of perception from the four type of Likert rating scale is as shown in the figure below:

3.5.4 Validity of the Instrument

Validation refers to the extent to which an instrument measures what is ought to measure (Ezeh, 2015) validity is the measure of the veracity of the instrument actually measuring what is supposed to measure (Ali, 2006) in this study the researchers in interested in face validity which assesses how the test measures what is supposed to test. Anyaokoha (2009) stated that a test is said to have face validity if it looks like going to measure what is made to measure. the instrument ranting scale for observing students classroom behavior, basic science performance test and basic science classroom environment scale questionnaire were validated by four (4) senior lectures in the faculty of education, science education department Ahmadu Bello University, Zaria. The Lecturers were requested to check the instrument with reference to language and content of basic science used respectively. It

was suggested that content of the test items was appropriate and relevant to the objectives of the study. The instruments were modified in line with the comments and suggestion of the experts after scrutiny.

3.5.5 Pilot Testing

The researcher carried out a pilot testing of the instrument in a school using different students that are not part of the sample that qualify as respondents for which the instruments are developed. The reason for this is to determine whether they have any difficulties in responding to the questions. The information obtained from the pilot testing will assist the researcher in making further modifications where necessary, and to determine the reliability of the instruments.

The pilot test was carried out using thirty students from Government Secondary School Kurami, Bakori Local Government Area. The BSPT was administered to the 30 students.

Instruction on how to answer the question were read out and explained to the students by the researcher to ensure that the students answered the instrument carefully. Pearson product moment correlational coefficient statistical tool was used for analysis.

The Psychosocial classroom questionnaire was administered to the same students at once. In this, the spilt half method was used employing odd and even number procedure.

3.5.6 Reliability of Instruments (BSPT and BSCEQ)

An instrument is said to be reliable if after repeated use. The results obtained are not different from each other (Sambo, 2008), Ali (2006) defined reliability as the extent to which measures obtained from repeatedly using an instrument do not vary so that such a value is then consistently accurate. Reliability has to do with consistency and stability of

an instrument or test (Olayiwola, 2010). Reliability indexes determine the proportion of the test score that is due to error (Korb, 2014). There are many reliability estimators.

During the trial testing, student responses to the BSCEQ items were scored and use to established the reliability index of the instrument. The Cronbach alpha reliability index was used to determine the reliability of the BSCEQ and this ranged from r=o.455 to r=0726. The reliability coefficient of the total instrument was found to be r=0.60. this coefficient of the instrument is moderately high since it was above average and therefore positive. Hence the instrument is reliable and therefore could be used for measuring BSCEQ.

Also the internal consistency coefficient of BSPT was calculated using Kudder Richardson (k-r20) and the index was found to be r=0.97 as adopted from (Wilkin and Oltman, 1997). Details of the calculation of the internal consistency coefficient of BSPT using Kudders Richardson (k-R20) is attached in appendix

3.5.7 Item Analysis

Item analysis is used for selecting and rejecting the item for the purpose of evaluating the quality of each item based on difficulties, discrimination and distracters. This is reported as follows:

Facility Index

The facility index or difficulty index show the difficulty of each of the items based on the percentage of subjects who got an item correct. The facility index for the instrument BSPT was determined using frust (1958) formular:-

$$\mathrm{F}\frac{RU+RLx100}{N}$$

Where:

F=facility index

RU=number of upper 27% of house who got the items correctly

RL= number of lower 27% who got the items correctly

N= total number of subjects in each of the upper and lower groups

(not the total respondents of the test)

Items with facility indices of between 0.30 to 0.70 were recommended and considered by, Furst (1958), Usman (2001) and Lakpini (2006), as adequate for selecting good test items for achieving test. In this study therefore, the items with facility indices in the range of 0.30 to 0.70 were used to for the study. Item with values between 0.029 were dropped because they were found to be too difficult while items with values of 0.70 and above were also dropped because they were found to be too simple (see appendix E).

Discrimination Index (DI)

The test items should be able to determine between high and low achievement 0.029 is a bad item because it is difficult, 0.50 is ideal, 0.30-0.70 as moderate as recommended by (Owotunde2010).The item with negative discrimination index (D) was considered to be discarded; D: 0.0 – 0.19 – poor item – to be revised; D: 0.2 – 0.29 – acceptable; D: 0.3 – 0.39 – good; D: >0.4 – excellent. In this study the BSAPT has discrimination index ranging from 15% to 55%. However, the discrimination index that falls between the ranges of 20% to 50% is retained Ibrahim and Zakaria (2015).

The analysis conducted revealed that ten questions were too difficult and were therefore discarded from the items. Hence, 30 questions were remaining.

3.6 Procedure for Data Collection

The students were given the BSPT and BSCESQ. The BSPT instrument contains 40 multiple choice items and each test have four responses options. Subjects were to identify correct response on the options provided. During the administration of the instruments, the researcher distributed the BSPT to the students' subject. The researcher allowed the subjects to read through the written instructions on how to answer the questions. The instructions were explained verbally were necessary. This is based on the time suggested (Inyang, 1988 & and Usman, 2000). The script were collected and marked by the researcher using the marking scheme as shown in the appendix. The students' scores were recorded and tabulated accordingly for data analysis based on gender.

The Psycho-social classroom questionnaire was also given to the subjects. The subjects were instructed to carefully tick SA, A; D or SD as is applicable to the class situation. The responses were marked (Fraser % Fraser). The recorded marks were collected for analysis, because on research question and hypothesis of the study.

3.7 Procedure for Data Analysis

The data collected for the study was analyzed using descriptive and inferential statistics. Descriptive statistics in the form of mean and standard deviation was used to analyze the research questions while correlational analysis was used to test the hypothesis as well as correlation analysis was be used to answer the research questions. For the purpose of testing the hypotheses, regression analysis will be employed.

The Research Question one: What is the relationship to which classroom psycho-social factors serves as predictor(s) to academic performance in upper basic science in Funtua education zone?

Hypothesis One: There is no significant predictive relationship between classroom psycho-social factors and academic performance in upper Basic Science in Funtua education zone Katsina, Nigeria

The statistical tool to be used for the research question is descriptive which comprises of simple frequency and percentage also mean and standard deviation. Furthermore, the hypothesis will be tested using multiple regression analysis at $p<0.05$.

Research Question two: What is the relationship to which classroom psychosocial factors serves as a predictor between male and female academic performance in upper basic science in Funtua education zone Katsina, Nigeria?

Hypothesis Two: There is no significant predictive relationship between classroom psycho-social factors and academic performance of male and female students in upper Basic Science in Funtua education zone, Katsina State, Nigeria.

The statistical tool to be used for the research question is descriptive which comprises of simple frequency and percentage also mean and standard deviation. Furthermore, the hypothesis will be tested using multiple regression analysis at $p<0.05$.

Research Question Three: what is the relationship to which psycho-social factors serve as a predictor to urban and rural students in upper Basic Science in Funtua education zone, Katsina, Nigeria.

Hypothesis Three: There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural and urban students in upper basic science in Funtua education zone, Katsina state, Nigeria.

The statistical tool to be used for the research question is descriptive which comprises of simple frequency and percentage also mean and standard deviation. Furthermore, the hypothesis will be tested using multiple regression analysis.

Research Question Four: What is the influence of classroom psycho-social factors as predictor among urban and rural male and female students academic performance in upper Basic Science in Funtua education zone, Katsina state, Nigeria?

Hypothesis Four: There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural male and female students in upper Basic Science in Funtua education zone, Katsina state, Nigeria.

The statistical tool to be used for research question is descriptive which comprises of simple frequency and percentage also mean and standard deviation. Furthermore, the hypothesis will be tested using Analysis of Variance (ANOVA).

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The study examined the Analysis of Classroom Psycho-social Factors as a Predictors to Academic Performance in Upper Basic Science, Funtua Zone, Katsina, Nigeria.

In this chapter, the data analysis and discussion of results in relation to the research questions stated and hypothesis formulated were discussed. The research questions were answered with the use of correlation analysis to determine the extent of relationships of independent variables with the dependent variables. Regression analyses were used to test the null hypotheses of the study with the significance level fixed at 0.05.

4.2 Data Analysis and Results Presentation

The data collected for the purpose of this study were analyzed based on the research questions stated and hypotheses formulated.

Research Question One:

What is the relationship to which classroom psycho-social factors serves as predictor to academic performance in upper basic science in Funtua education zone?

The data collected for the purpose of answering the research question one were analyzed using correlation analysis to determine the extent of relationship between classroom psycho-social factors and academic performance of in upper basic science. The result of the analyses is presented in Table 4.1

Table 4.1: Descriptive Statistics of Students' View of Classroom Psycho-social Factors on Academic Performance in Upper Basic Science

Variables	Psycho-socio factors	N	X	SD
	Students	300	2.40	0.48
	Teachers	300	2.49	0.37
Acad. Perf	Parental Influence	300	2.52	0.51
	Classroom management	300	2.49	0.53

Table 4.1 revealed the Pearsons correlations analysis of classroom psycho-social factors (Student - Student Interaction, Teacher-Student interaction, Parental Influence, and classroom management) and academic performance of learners in upper basic science. The result shows that there is a weak relationship between the observed variables: Student-Student Interaction, Teacher-Student interaction, Parental Influence, and Classroom management respectively and the predicted variable: academic performance in upper basic science. This shows weak but positively correlation with academic performance of learners. On the other hand, the correlation coefficient obtained on Student - Student Interaction and Classroom management revealed a weak but negative correlation with academic performance. This entails that students' academic performance is positively related with teacher-student interaction and parental influence but negatively related with student - Student Interaction.

Research Question two:

What is the relationship to which classroom psycho-social factors serves as a predictor between male and female academic performance in upper basic science in Funtua Education zone Katsina, Nigeria?

The data collected for the purpose of answering research question two were analyzed using correlation analyses to determine the extent of relationship between classroom psycho-

social factors and gender performance in upper basic science. The result from the analysis is presented in Table 4.2

Table 4.2: Descriptive Statistics of Students' View Classroom Psycho-social Factors and Academic Performance of Male and Female in Upper Basic Science

Variable	Psycho-socio variables	N	X	SD
Males' performance	Student - Student Interaction	300	2.49	0.37
	Teacher-Student interaction	300	2.52	0.51
	Parental Influence	300	2.91	0.37
	Classroom management	300	2.72	0.51
Females' performance	Student - Student Interaction	300	2.51	0.70
	Teacher-Student interaction	300	2.66	0.13
	Parental Influence	300	2.34	0.32
	Classroom management	300	2.22	0.15

WP = Weak positive

Table 4.2 shows the Spearman Rank correlation analysis of classroom psycho-social factors and academic performance of male and female in upper basic science. The result from the Table shows that there is a relationship between academic performance of male and female students and classroom psycho-social factors (student-student interaction, teacher-student, parental influence and classroom management) the coefficient obtained on student-student interaction, teacher- student interaction, parental influence and class management of classroom psycho-social factors for male learners students indicates weak but positive relationship with male students academic performance. For female's student, the coefficient of these classroom psycho-social factors implies that classroom psycho-social factors have weak but positive relationship with female academic performance. The result reveals that classroom psycho-social factors of student-student interaction, teacher-student interaction, parental influence and classroom management are positively related

with male academic performance and also positively related with female academic performance of students.

Research questions Three:

What is the relationship to which classroom psychosocial factors serves as a predictor to urban and rural in upper basic science in Funtua education zone Katsina Nigeria?

For the purpose of answering this research question, the data collected were analyzed using correlation analysis so as to determine the extent to which classroom psycho-social factors serves as predictor to urban and rural students academic performance in upper basic science in Funtua education zone Katsina Nigeria

Table 4.3: Descriptive Statistics of Classroom Psycho-social Factors and Academic Performance of Urban and Rural Students Academic Performance in Upper Basic Science

Variables	Psycho-socio variables	N	X	SD
Urban	Student - Student Interaction	300	2.40	0.48
	Teacher-Student interaction	300	2.49	0.53
	Parental Influence	300	2.51	0.51
	Classroom management	300	2.48	0.43
Rural	Student - Student Interaction	300	2.51	0.90
	Teacher-Student interaction	300	2.66	0.23
	Parental Influence	300	2.34	0.12
	Classroom management	300	2.22	0.14

Table 4.3 revealed the Pearson correlation analysis of classroom psycho-social factors (student-student interaction, teacher-student interaction, parental influence and classroom management) and academic performance of urban and rural students in upper basic science. The result from the Table reveals that there is a weak but negative relationship between student-student interaction in urban students, teacher-student interaction in rural students in upper basic science. Strong but positive relationship between teacher-student

interaction, parental influence and academic performance of students\ in urban. And also weak but negative relation between classroom management in urban student-student interaction and classroom management. The coefficients obtained on student-student interaction, teacher-student interaction, parental influence and classroom management for urban learners students are positively strong while on the other hand, the coefficient obtained on the same psycho-social factors for rural school are positively weak.

Research Question Four:

What is the influence of classroom psychosocial factor as predictor among urban and rural male and female academic performance in upper basic science Funtua education zone Katsina Nigeria?

The data collected for the purpose of answering the research question four were analyzed using correlation analysis to determine the extent of the relationship between classroom psycho-social factors of the urban and rural male and female academic performance of slow learners' in upper basic science. The result of the analysis is presented in Table 4.4

Table 4.4: Descriptive Statistics of Classroom Psycho-Social Factors and Academic Performance of Urban and Rural Male and Female Students

Variables	Psycho-socio variables	N	X	SD
Urban Male Performance	Student - Student Interaction	164	2.39	.47337
	Teacher-Student interaction	164	2.46	.36971
	Parental Influence	164	2.52	.51809
	Classroom management	164	2.54	.55116
Urban Female Performance	Student - Student Interaction	136	2.42	.48946
	Teacher-Student interaction	136	2.53	.35777
	Parental Influence	136	2.51	.49393
	Classroom management	136	2.44	.50285
Rural Male Performance	Student - Student Interaction	164	2.39	.37337
	Teacher-Student interaction	164	2.46	.26971
	Parental Influence	164	2.52	.31809
	Classroom management	164	2.54	.25116
Rural Female Performance	Student - Student Interaction	136	2.21	.19246
	Teacher-Student interaction	136	2.15	.33077
	Parental Influence	136	2.01	.29393
	Classroom management	136	2.34	.30285

Table 4.4 shows correlation analysis of classroom psycho-social factors and students academic performance in upper basic science The coefficient obtained on student-student interaction, teacher-student interaction, parental influence and classroom management for urban male performance , urban female performance, rural male performance and rural female performance implies that all the observed variable have weak positive and negative relationship with the predicted variables.

Testing of Null Hypotheses

The null hypotheses for this study were formulated in line with the objectives and research questions. The stated null hypotheses were tested at 0.05 alpha level of significance**.**The considered p-value is used as the basis to either reject or accept the null hypotheses. To test

whether the relationship obtained between the dependent and independent variables are significant, hence the result is presented as follows;

HO_1: There is no significant relationship between classroom psycho-social factors and academic performance in upper Basic Science in Funtua education zone Katsina, Nigeria.

This hypothesis was tested using multiple regression analysis at P≤0.05 level of significance. The test model revealed the coefficient for determination of the variation in learners academic performance which implies that the selected psycho-social factors could only account for 4.6 percent of variation in student academic performance. The result of the regression is presented in Table 4.5

Table 4.5: Multiple Regression Analysis between Classroom Psycho-social Factors and Academic Performance in Upper Basic Science.

		Unstandardized Coefficients		Standardized Coefficients		Remark
Variable		B	Std. Error	Beta	p-value	
Acad Perf.	(Constant)	11.158	4.401		.012*	Sig
.	Student-student Interaction	-.090	.678	-.008	.004*	Sig
	Teacher-Student interaction	1.263	.893	.082	.015*	Sig
	Parental Influence	1.106	.648	.099	.009*	Sig
	Classroom Mang.	-.670	.612	-.063	.025*	Sig

Key; acad= academic, perf=performance

* p ≤0.05, ns = not significant

Table 4.5 indicates the result of the multiple regression analysis of classroom psycho-social factors of students academic performance. The result of the analysis shows that teacher-student interaction with P-value of 0.015 and parental influence with P-value of 0.009; which are less than the 0.05 of significance; significantly predict slow learners'

positive relationship between teacher-student interaction and parental influence on academic performance in upper basic science. Thus the null hypothesis which states that there is no significant difference between classroom psycho-social factors and students academic performance in upper basic science in Funtua education zone Katsina state, Nigeria is rejected. However student-student interaction with P-value of 0.204 and classroom management with P-value of 0.102; which are greater than 0.05 level of significance; did not significantly predict students' academic performance in upper basic science. Hence, the hypothesis is retained.

HO_2: There is no significant predictive relationship between classroom psycho-social factors and academic performance of male and female students in upper basic science in Funtua education zone Katsina, Nigeria.

This hypothesis was tested using multiple regression analysis at $P \leq 0.05$ level of significance. The value reveled by test model suggests the selected psycho-social factors accounted for 5.4 percent of the variation in academic performance. The result of the analysis is presented in Table 4.6. This hypothesis was tested using multiple regression analysis at $P \leq 0.05$ level of significance. The test model revealed a coefficient for determination of variation in academic performance (R^2) of 0.046; which implies that the selected psycho-social factors could only account for 4.6 percent of the variation in student academic performance. The result of the regression is presented in Table 4.6

Table 4.6a: Multiple Regression Analysis of Male Students' View of Classroom Psycho-social Factors and Academic Performance of Male and Female Students in Upper Basic Science.

	Unstandardized Coefficients		Standardized Coefficients		Remark
Gender	B	Std. Error	Beta	p-value	
Male performance					
(Constant)	3.804	2.915		.013	Sig
Student - Student Interaction	1.275	.894	.083	.053	NS
Teacher-Student interaction	1.227	.645	.110	.050	Sig
Parental Influence	0.406	.648	.099	.009*	Sig
Classroom management	-0.670	.612	-.063	.025*	Sig

Table 4.6b: Multiple Regression Analysis of Female Students' View of Classroom Psycho-social Factors and Academic Performance of Male and Female Students in Upper Basic Science.

	Unstandardized Coefficients		Standardized Coefficients		Remark
Gender	B	Std. Error	Beta	p-value	
Female performance					
(Constant)	4.084	1.153		.041	Sig
Student - Student Interaction	0.725	.184	.103	.030	Sig
Teacher-Student interaction	1.027	.459	.210	.010	Sig
Parental Influence	1.406	.408	.101	.029*	Sig
Classroom management	2.701	.112	1.131	.051*	NS

The result from this Table illustrates the multiple regression analyses between classroom psycho-social factors and slow learners academic performance of male and female students in observed Basic science. The result from the Table indicates that All the psycho-social factors(student-student interaction, teacher-student interaction, parental influence and classroom management) with P-value 0.053, 0.050, 0.009,0.025 for male slow learners' students and for female with P-value 0.030, 0.010, 0.029 and 0.051 respectively are less than 0.05 level of significance, which indicate significantly predictive relationships in psycho-social factors and academic performance of males and females in upper basic

science. Hence the hypothesis which states that "there is no significant predictive relationship between classroom psycho-social factors and academic performance of male and female slow learners in upper basic science in Funtua education zone Katsina, Nigeria" is hereby rejected.

HO_3: There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural and urban students in upper basic science in Funtua education zone Katsina, Nigeria.

This hypothesis was tested using multiple regression analysis of $P \leq 0.05$ level of significance. The test model revealed suggests that the selected psycho-social factor could only account for the variation in academic performance of rural student. The result of the analysis is presented in Table 4.7

Table 4.7a: There is no Significant Relationship between Classroom Psychosocial Factors and Academic Performance of Urban Learners in Upper Basic Science

		Unstandardized Coefficients		Standardized Coefficients		Remark
Location	Variable	B	Std. Error	Beta	p-value	
Urban settlement						
	(Constant)	17.380	3.240		.000	Sig
	Student - Student Interaction	.098	.680	.008	.006	Sig
	Teacher-Student interaction	-.613	.614	-.058	.031	Sig
	Parental Influence	.817	.650	.074	.209	Ns
	Classroom management	-1.412	.761	-.108	.064	Ns

Table 4.7b: There is no Significant Relationship between Classroom Psychosocial Factors and Academic Performance of Rural & Urban Learners in Upper Basic Science

Location	Variable	Unstandardized Coefficients		Standardized Coefficients		Remark
		B	Std. Error	Beta	p-value	
Rural settlement						
(Constant)		5.42	1.333		.011	Sig
Student - Student Interaction	.	0.025	.014	.201	.000	Sig
Teacher-Student interaction	.	2.11	.459	.210	.010	Sig
Parental Influence	.	-0.106	.408	-.101	.029*	Sig
Classroom management		-3.501	.112	-.221	.001*	Sig

Table 4.7 shows multiple regression analysis between classroom psycho-social factor and academic performance of rural and urban slow learners in upper Basic Science. The result from the Table 4.7 indicates that teacher-student interaction with P-value 0.006 and 0.031which are less than 0.05 level of significance. This therefore, means that there is predictive significant relationship in academic performance of urban students in Upper Basic Science. Thus the hypothesis three which state that "there is no significant relationship between classroom psycho-social factors and academic performance of rural and urban student' student in upper Basic Science in Funtua Education Zone, in Katsina state, Nigeria" is hereby rejected. However parent influence and classroom management with P-value 0.209 and 0.064 respectively which are greater than 0.05 level of significance; do not significantly predicts urban academic performance of students in upper Basic Science. Hence the hypothesis is retained. Meanwhile with reference to the rural student, all the classroom psycho-social factors with their P-value 0.001, 0.001, 0.029 and

0.001 which are less than 0.05 level of significance. This indicates that there is significant predictive relationship between classroom psycho-social and academic performance of rural students. Hence the hypothesis is also rejected.

HO_4: There is no significant predictive relationship between classroom psycho-social factors and academic performance of rural and urban male and female in upper basic science in Funtua education zone Katsina, Nigeria.

This hypothesis was tested using simple linear regression analysis at 0.05 level of significant. The R^2 value of 0.013 is revealed by the test model: and this implies that urban and rural male and female student in upper Basic Science could only account for 1.3 percent of the variation in the academic performance in the subject.

Table 4.8a: Multiple Regression Analysis of Psycho-socio Factors on Students' Academic Performance for Rural Male & Female Learners' in Upper Basic Science

		UNSTD Coef		STD Coef		
Gender		**B**	**Std. Error**	**Beta**	**p-value**	**Remark**
Rural Male performance	(Constant)	5.053	6.148		0.412ns	Ns
	Student - Student Interaction	-.224	0.945	-0.018	0.013*	Sig
	Teacher-Student interaction	2.831	1.253	0.179	0.025*	Sig
	Parental Influence	2.264	0.897	0.201	0.013*	Sig
	Classroom management	-.398	0.827	-0.038	0.631	NS

* = significant at 0.05, ns = not significant, Dependent Variable = performance
R^2 for male = 0.083, female = 0.038

Table 4.8b: Multiple Regression Analysis of Psycho-socio Factors on Students' Academic Performance of Rural Female Learners' in Upper Basic Science

		UNSTD Coef		STD Coef		
Gender		**B**	**Std. Error**	**Beta**	**p-value**	**Remark**
Rural Female performance	(Constant)	19.083	6.444		0.004*	Sig
	Student - Student Interaction	-.125	0.965	-0.011	0.897	Sig
	Teacher-Student interaction	.045	1.295	-0.003	0.002*	Sig
	Parental Influence	.121	0.946	-0.011	0.008*	Sig
	Classroom management	-1.618	0.939	-0.152	0.087	NS

* = significant at 0.05, ns = not significant, Dependent Variable = performance
R^2 for male = 0.083, female = 0.038

Table 4.8c: Multiple Regression Analysis of Psycho-socio Factors on Students' Academic Performance for Urban Male Learners' in Upper Basic Science

		UNSTD Coef		STD Coef		
Gender		**B**	**Std. Error**	**Beta**	**p-value**	**Remark**
Urban Male performance	(Constant)	5.053	6.148		0.412	NS
	Student - Student Interaction	-1.014	0.864	-0.091	0.242	NS
	Teacher-Student interaction	-1.194	1.099	-0.085	0.279	NS
	Parental Influence	2.264	0.897	0.201	0.013*	Sig
	Classroom management	-.398	0.827	-0.038	0.631	NS

* = significant at 0.05, ns = not significant, Dependent Variable = performance
R^2 for male = 0.083, female = 0.038

Table 4.8d: Multiple Regression Analysis of Psycho-socio Factors on Students' Academic Performance for Urban Female Learners' in Upper Basic Science

		UNSTD Coef		STD Coef		
Gender		**B**	**Std. Error**	**Beta**	**p-value**	**Remark**
Urban Female performance	(Constant)	19.083	6.444		0.004*	Sig
	Student - Student Interaction	-.125	0.965	-0.011	0.897	Sig
	Teacher-Student interaction	-.418	0.987	-0.038	0.672	NS
	Parental Influence	-1.614	1.064	-0.138	0.132	NS
	Classroom management	-1.618	0.939	-0.152	0.087	NS

* = significant at 0.05, ns = not significant, Dependent Variable = performance
R^2 for male = 0.083, female = 0.038

Table 4.8 shows multiple regression analysis between the classroom psycho-social factors and academic performance of urban rural male and female in upper Basic Science.

The result from the Table indicates that student-student interaction, teacher-student interaction and classroom management with their P-value 0.242, 0.279, 0.631 respectively which are greater 0.05 level of significance, did not significantly predict urban male academic performance of slow learners in upper Basic Science. Thus the hypothesis which states that there is no significant difference between classroom psycho-social factors and academic performance of rural and urban male and female student in upper Basic Science in Funtua education zone Katsina state, Nigeria is retained. But parental influence with the P-value 0.013, which is less than 0.05 level of significance; significantly predict the academic performance of urban male students.

Hence the hypothesis is rejected. Meanwhile in urban female, student-student interaction, parental influence and classroom management with P-values of 0.672, 0.132 and 0.087 respectively which are greater than 0.05 level 0f significance did not significantly predict academic performance. Hence the hypothesis is retained. But student-student interaction with the P-value 0.898 which is less than 0.05 level of significant; significantly predict academic performance of urban female. However classroom psycho-social factors of student-student interaction, teacher-student interaction, parental influence with P-values of 0.013, 0.025, 0.013, respectively for rural male and 0.0897, 0.002, 0.008 from female which is less than 0.05 level of significant, significantly predict academic performance of rural male and female students in upper Basic Science. Hence the hypothesis is rejected, meanwhile classroom psycho-social factors of classroom management with P-value of 0.63 for rural male students and 0.087 for rural female students which is greater than 0;05 level

of significance did not significantly predict the academic performance of rural male and female therefore the hypothesis is retained.

4.3 Summary of Major Findings

Based on the results of the analyses of the data col1ectel for this research work, the major findings are the followings:

(1) There was a significant positive relationship between classroom psycho-social factors of parental influence, teacher-student interaction and academic performance in upper basic science. Classroom psycho-social factors significantly predict the academic performance of slow learner in the upper basic science, therefore the hypothesis is rejected. Because the P-value is less than 0.05 level of significant. However there was no significant relationship between the classroom psycho-social factors of student-student interaction, classroom management and academic performance in upper basic science. These classroom psycho-social factors did not significantly predict the academic performance in upper basic science therefore the hypothesis is retained because the P-value is greater than 0.05 level of significant.

(2) There was a significant positive but weak relationship between classroom psycho-social factors of parental influence, student-student interaction, teachers-student interaction, classroom management and academic performance in upper basic science. The significantly predict academic performance of male in upper basic science hypothesis is rejected. Meanwhile for female the classroom psycho-social factors also significantly predict the academic performance of female in upper basic science which brought about a weak but positive relationship between the female academic performance and classroom

psycho-social factors hence the hypothesis is also rejected. Because the P-value is less than the 0.05 level of significant classroom psycho-social factors of parental influence and class management did not significantly predict academic of urban students in upper basic science. The hypothesis is rejected because the P-value is greater than the 0.05 level of significant hence there was no significant relation between academic performance of urban students and classroom psycho-social factors. While the classroom psycho-social factors of students-student interaction and teacher-student interaction significantly predict urban academic performance in upper basic science hence the hypothesis is rejected because the P-value of these psycho-social factors is less than the 0.05 level of significant therefore there is a significant relationship between the classroom psycho-social factors and academic performance in upper basic science. But for rural students' there was a significant reaction between classroom psycho-social factors of student-student interaction, teacher-student, parental influence and class management academic performance of rural students in upper basic science. Hence these classroom psycho-social factors significantly predict the rural academic performance in upper basic science thereby rejecting the hypothesis because their P-value is less than the 0.05level of significant.

(3) There is no significant relationship between classroom psycho-social factors of teacher-student interaction, student-student interaction and class management and academic of urban male student in upper basic science. Hence the hypothesis is retained because the classroom psycho-social factors did not significantly predict the academic performance urban male slow learners. the P-value is greater than0.05 level of significant but parental influence with P-value less than 0.05 level of significant, significantly predict the

academic performance of urban male hence hypothesis is rejected. Meanwhile the urban female classroom psycho-social factors of student-student interaction, parental influence and class management did not significantly predict the academic performance of urban female slow learners upper because the P-value of these psycho-social factors are greater than 0.05 level of significant hence the hypothesis is retained. But student-student interaction with P-value less than 0.05 level of significant, significantly predict academic performance of urban female in upper basic science. However there is significant relationship between the classroom psycho-social factors of student-student interaction, teacher-student interaction, parental influence and academic performance of both male and female rural students. The P-value of these psycho-social factors are less than 0.05 level of significant therefore significantly predict academic performance of rural male and female in upper basic science while class management of rural male and female with P-value greater than 0.05 level of significance, did not significantly predict the academic performance of rural male and female slow learners hence the hypothesis is retained.

4.4 Discussion of the Results

This study analyses classroom psycho-social factors (teacher-student interaction, student-student interaction, parental influence and classroom management.) as a predictor(s) to academic performance in upper basic science Funtua Educational zone Katsina state. The discussion to the research questions and hypotheses stated for the research. The data collected from the questionnaire, basic science performance Test and Rating scale for observing students behavior were administered analyzed using regression analyses. Multiple regression analyses were used to test whether there were significant contributions

of the independent variables to the prediction of the dependent variables. The analyses addressed the researched questions stated and hypotheses formulated.

The result shown in Table 4.1 and Table 4.5 were presented to answer the research question one, and to show the result of testing null hypothesis one respectively. Result from Table 4.1 revealed that there were positive relationships between classroom psycho-social factors of parental influence, classroom management and academic performance of students in upper basic science in Funtua. This means that academic performance increase with increase in parental influence and classroom management. While student-student interaction and teacher- student interaction showed an inverse relationship with academic performance of students. This may be as result of the computer age children that like to operate everything in the handset, computer and pay less attention to academic work. Whereas parents who want their children to excel, will pay much attention to them develop good study habit. Table 4.5 showed that the testing is null hypothesis one.

The hypothesis focuses on the relationship between psycho-social factors parental influence, student-student interaction and students' academy performance in upper basic science. The result of the analysis from table 4.5 shows that there were significant positive relationships between parental influence and academic performance. Meaning that, parental influence had significant contribution to the prediction of academic performance of slow learners. This could be explain by the fact the parents, through their specific roles either positive or negative influences on students academic performance; depending on their roles in the education of this slow learners. Thus, the result is indications that parent have really played their roles as they as they are expected. The finding of the study is in line with the finding of Higgins (2011), Milad and Sayid (2011), Nel (2013), Daniela and

Daniela (2013) and Twnm-Ampofo and Oei-Owusus (2015) among others who in separate studies reported significant positive correlations between parental influence students academic performance. This means that parents who are fully involved in the education of their children; such that they pay school fees in time and ask their children results etc; are likely to have children/students with better results.

In the relation to student-student interaction, in the psycho-social factors observed, the result from Table 4.5 showed that there were significant inverse relationship between student-student interaction and students' academic performance declines. This is not so surprising because, students nowadays showed poor study habit due to increased in time of watching television and so on, instead of spending more time on their studies and tutorials. However, this depends on the type of peers (bad or good) students interact with. student who interacts with bad peers; such as those who engage in bad habit like drinking, stealing, smoking and sexual harassment among others are likely to have lower academic performance. The finding confirmed the early findings by Bellemare, Lepage and Sherrer (2009) who found that peer groups could decrease the productivity of workers Tope (2011) and Akhtar (2011) in their separate studies reported that student-student interaction had relationship with students' academic performance of slow learners.

However, the findings are contrary to the findings of Sajjad *et al* (2013) and Jain and Kapoor (2013) who found significant positive impact of student-student interaction in academic performance. Korri and Kipkemboi (2014) also reported that student-student interaction made significant positive contribution to the students' academic performance. Again, Twnm-Ampofo and Oei-Owusu (2015) found significant positive correlation between student-student interaction and students' academic performance. This might with

interaction's that have good study habits and come from homes where parents involves themselves fully in the education of their children.

The analysis of data for purpose of answering research question as presented in Table 4.2 showed that there is positive relationship between classroom psycho-social factors and academic performance of male and female slow learners' student. The result of the analysis for test null hypothesis two as presented in Table 4.6 indicted that gender wise, there was no statistical significant relationship between academic performance of male and female students and classroom psycho-social factors. In relation to male performance this could be indicated that in a situation where teacher-student interaction is low, teachers dominate the classroom talk such that all the students (male and female) had equal opportunities of participation in the classroom, to the extent that no sex dominate the interactive session of the classroom at the expense of other; which could had resulted to performing high by the dominating sex. Besides, it could also be explain by the factors that teachers might have encouraged and motivated the students regardless of sex, as the guided them for classroom interaction especially the one in which the teacher and student have equal level of participation. The finding is in agreement with Tambya. (2009) who learners to medium level teacher-student interaction. This result is also in support of Ndirika (2009) who also noted that there was no significant difference in the mean score of male and female's teacher-student interaction. It signified that there was no significant relation between male and female students' performance.

However, with reference to teacher-students interaction, to result presented, indicates a significant relationship with male students academic performance, and there was no significant relationship with the female academic performance. This could be explain by

the fact that since the case of the students dominated the classroom, it could be possible that male student were more interactive than their female counterpart; which could have resulted to making the relationship more significant. Besides, this could not be uncounted to the fact that most female naturally shy away from classroom verbal interaction. They are naturally calm when compared to their male counterparts which confirmed Ndirika (2009), who found significant academic performance between male and female taught with teacher-student interaction; with male performing better than females. It implied that there was a significant relationship high level of teacher-student interaction and the performance of male students.

The finding is also in line with Akhtar and Aziz (2011) who found that there was no significant relationship between classroom psycho-social factors of parental influence and academic performance of male students. However with reference to females' performance, the finding is contrary to Akhtar and Aziz(2011) who also found significant positive relationship between classroom psycho-social factors of parental influence and academic performance of female students.

The analysis of data for the answering three presented in Table 4.3 showed the relationship between classroom psycho-social factors of student-student interaction, teacher-student interaction, classroom and parental influence and academic performance of urban and rural students in upper basic science. The result from the Table revealed that there is a weak but negative relationship between student-student interaction and academic performance in urban and also weak but negative relation in rural. This means that student-student interaction has no or less effect on academic performance in both urban and rural schools. However there is a strong but positive relationship between the psycho-social factors of

teacher-student, parental influence and classroom and academic performance in urban schools and weak but positive relationship of these psycho-social factors and academic performance in rural schools. This means that academic performance increases when there is a good relation between teacher and student, parent and students and good class management. Meanwhile in the village the relationship is not as strong as in the urban schools. The result from the Table demonstrates that positive relationship exists between classroom psycho-social factors and academic performance of urban and rural in upper basic science. However when the significant of the relationship between these psycho-social factors and academic performance was tested as suggested in the null hypothesis three, the result of the analysis presented in Table 4.7 indicted that the entire classroom psycho-social factor showed no significant relationship with academic performance of urban and rural students. It implies that none of these psycho-social factors had a significant Contribution to the prediction of academic performance of urban and rural students in Basic Science. The finding is in agreement with MacClinerney, *et al,* (2005) who found that support from teachers had strongest impact on students' academic performance. Splilt *et a*l (2011) reported that teacher-students interaction was a major psycho-social factor affecting students' academic performance. Onah and Ugwu (2010) noted the academic performance of students lied within the teacher-student interaction in a giving subject. Hughes and Chen (2011) reported the supportive and positive relationship in teacher-student interaction promotes academic performance. Larson (2011) also agreed that teacher-student interaction could affect either in a positive or negative way in slow learners' students.

The analysis of data for purpose of answering research question number two as presented in Table 4.2 showed that there were positive relationship between classroom psycho-social factors and academic performance of male and female slow learners students. The result of the analysis for testing null hypothesis two as presented in Table 4.6 indicated that gender wise, there was no statistical significant relationship between academic performance of male and female slow learners and classroom psycho-social factors. In relation to male students' performance, this could be an indication that, in a situation where teacher-student interaction was low, the teachers dominate the classroom talk such that all the students (male and female) had equal opportunities of participation in the classroom; to extent no sex dominated the interactive session of the classroom at the expense of other; which could have resulted to performing high by the dominated sex. It could also be explained by the fact teachers might have encouraged and motivated the student regardless of sex, they guided them for the classroom interaction especially the one in which teachers and students have equal level of participation. The finding is in agreement with Tambaya (2007) who found no significant to academic works. Whereas parents who want their children to excel, will pay much attention and make them develop good study habit.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study examined the "Analysis of Classroom Psycho-social Factors as a Predictor(s) to Academic Performance in Upper Basic Science Funtua Zone, Katsina Nigeria". This chapter presents the Summary of the study, summary of findings, conclusions, recommendations and suggestions for further studies.

The chapter is presented in the following sub-headings

5.2 Summary of the Study

5.3 Summary of Major Findings

5.4 Conclusions

5.5 Recommendations

5.6 Contributions to Knowledge

5.7 Limitations of the Study

5.8 Suggestions for Further Studies

5.2 Summary of the Study

The study tried to investigate the influence of classroom psycho-social factors as a predictor(s) to academic performance in upper basic science Funtua Zone, Katsina Nigeria. The study was presented in five chapters which this section tries to presents their main points. Chapter one presents the introduction and background to the study. It also presented the significance of the study as well as the statement of problems that necessitated the

study. The scope of the study as well as assumptions of the study was also contained in this chapter. The second chapter comprehensively presented the literature that are in line with this study, the chapter presents seven different headings which include teaching of science, psycho-social factors, performance, classroom management, location and gender issues as they influence performance. Chapter three was the methodology of the study which used correlational design method. The population of the study was 5044 from which a total of 300 students were sampled for the study. The instrument consists of psycho social factors items questionnaire (BSCESQ) and performance test. The fourth chapter detailed the analysis of the data collected for the study. This involves the bio data presentation, answering of research questions as well as testing the research hypotheses with the Regression analysis at 0.05 alpha level of significance. The discussions on findings were also presented in this chapter. The last chapter presented the summary of the major findings, the conclusions that were deduced from the study as well as recommendations put forward by the researcher that would enhance performance, contributions to knowledge as well as limitations of the study and suggestions for further studies:

5.3 Summary of Major Findings

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

1. There is relationship between classroom psychosocial factors and academic performance of students in Upper Basic Science in Funtua Education Zone Katsina State.

2. There is no significant predictor difference between classroom psycho social factors and academic performance of male and female in upper basic science in Funtua education zone of Kaduna state.
3. There is no significant predictor difference between classroom psycho social factors and academic performance of urban and rural students in upper basic science in Funtua education zone of Kaduna state.
4. There is no significant predictive difference between classroom psycho social factors and academic performance of rural male, rural female, urban male and urban females in upper basic science in Funtua.

5.4 Conclusions

The basic conclusions could be deduced from the study are enumerated below

1. The level of Student-Student Interaction is very high specifically, as each interact a lot with other students in the basic science class and they help their classmates to understand basic science subject.
2. The teacher-student interaction in the schools is generally low as the cumulative mean is below the standard mean. Specifically most of the students assert that they do not relate well with their teachers and that their teacher hardly cares about them.
3. In summary, the level of Parental influence on the performance of the respondents is high, particularly parents interest in their studies and parent helping them to do their homework.

4. Generally the level of response on classroom management is appreciably high and on the positive side. Even though it was also highly asserted that Basic Science class is disorganized during basic science lessons.
5. The location of the school has high influence on the performance of students in Basic Science especially as most of the students had to study in the day time as the school location has no electricity and some have dislike for the school environment.
6. The influence of gender on performance is high. Specifically as most want to do their best in school and most believe that their class boys perform better than the girls.

5.5 Recommendations

The researcher put forward the following recommendations that will further enhance the performance in Basic Science in relation to the psycho social factors.

1. Students should build their relationship with other students by relating well with the other students during basic science lesson and asking the brighter ones to conduct tutorial classes among themselves.
2. Teachers should build strong relationship with their students through one and one relationship since each students had different ability levels
3. Parents should promptly pay the school fees of their children and also ask the children the type of friends they keep during or after school hours.
4. The class room management should be conducive for teaching and learning Basic science through monitoring the student-teacher ratio and reducing noise making and rowdiness.
5. Location of school should be sited in serene environment and should be well loved by the students and easily accessible to the students and teachers

6. Both male and female should be given equal opportunities to excel in the teaching and learning Basic science by taking their peculiarities into consideration
7. There should be regular supervision of the implementation of Basic science curriculum in the secondary schools for possible review where necessary.

5.6 Contributions to knowledge

This study titled the influence of psycho social factors on performance among upper Basic science students in Funtua will contribute to knowledge in several ways;

1. The study has established that there is a significant relationship between classroom psycho-social factors and academic performance.
2. The study also established that gender has influence on the relationship between classroom psycho-social factors and academic performance.
3. The instrument developed by the researcher can be used for similar studies.
4. As` far as I am concerned, this study is probably the first of its kind in Funtua Educational Zone, Katsina State.

5.7 Limitations of the study

The study titled the influence of psycho social factors on performance among upper Basic science students in Funtua, is limited to the following factors or circumstances

1. The researcher could not carry out the study in the whole state due to time factor.
2. Other subject areas could have been carried out but due to time factor is not possible.
3. Other areas of classroom psycho-social factors such as class management, that was not touched is a s result of time factor

5.8 Suggestions for further studies.

The study is titled the influence of psycho social factors on performance among upper Basic science students in Funtua, It can be further studied under the following but related headings.

1. Impact of interest and motivation on the academic performance of Basic Science students in Funtiua, Katsina state.
2. Assessment of the curriculum implementation of Basic science coverage in Secondary schools in Katsina state

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APPENDIX I

BASIC SCIENCE CLASSROOM ENVIRONMENTALQUESTIONNAIRE (BSCEQ)

Section A

Please tick ( ) against any response that best describes what your Basic Science classroom learning environment is like, if you change your mind about an answer, just cross it out and tick another response.

KEY: SA-Strongly Agree 4

A-Agree 3

D-Disagree 2

SD-Strongly Disagree 1

(A) Exam No/No in Register……..

(B) School……...

(C) Class……

(D) Gender: ……

S/NO	ITEMS	SA	A	D	SD
A	**Student – Student Interaction**				
1	I am not very friendly with other students during Basic Science Lesson				
2	I help my classmates to understand basic science subject				
3	I like relating with other students during Basic Science lesson				
4	Students interact a lot with each other in the Basic Science Class				
5	I interact a lot with other students in the Basic Science class.				

B	**Teacher-Student interaction**	SA	A	D	SD
6	I relate well to my teacher				
7	My teacher care about me				
8	I like my teacher				
9	The teacher praises any little effort made by students in the Basic Science class				
10	I go to my teacher when I need help				
11	I am eager to attend my Basic Science classes whenever there is Basic Science on the time table				
12.	My Basic Science lessons are enjoyable				
13	I feel unhappy after each Basic Science Lesson				
14	I look forward to having my Basic Science lessons because I have the intention to read medicine				
15.	I enjoy my basic science lesson				
D	**Parental Influence**	SA	A	D	SD
16	My parent help me to do my homework				
17	My parents are interested in my studies				
18	My parents ask me about my friends in school				
19	My parents are interested about my opinions on my studies				
20	My parent pays my school fees				
E	**Classroom management**	SA	A	D	SD
21	My class is disorganized during Basic Science lessons				
22	My lessons are usually well organized and interesting				

23	I cannot see what the teacher is writing on the board				
24	I am quiet in the Basic Science class				
25	My Basic Science class is very noisy				
F	**Location**	SA	A	D	SD
26	I like the location of my school				
27	I don't like my school environment				
28	I study in the day time because there is no electricity in my school				
29	I enjoy basic science practical				
30	My school does not have laboratory for any kind of practical				
G	**Gender**				
31	I can learn new ideas quickly in school				
32	I am capable of getting straight A's				
33	I want to do my best in school				
34	I work hard at school				
35	I put a lot of effort				
36	Into my school work				
37	My class boys perform better than the girls'				

Adopted by: Yakubu Peter, (2015)

APPENDIX II

BASIC SCIENCE PERFORMANCE TEST (BSPT)

Instruction: Answer all Questions

Choose the appropriate option from letter A-D

This instrument **BSPT** is not to be recorded in your examination scores, please answer it as freely as you can. THANK YOU.

1. Which of the following is not polluted water? (a) Colorless (b) Tasty (c) Colored (d) Smelly

2. Which of the following is not a cause of water pollution (a) Adding alum (b) putting fertilizer (c) washing of clothes (d) farming

3. Which of the following is not an industrial waste?(a) Water from washing clothes (b) water from farming (C) water from toilet (d) water from fertilizer plant.

4. which of the following is a domestic waste (A) water from washing clothes (b) water from farming (c) water from toilet (d) water form fertilizer plant.

5. Which of the following is an agricultural waste (a) water from washing clothes (b) water from farming (c) water from toilet (d) water from fertilizer

6. Which of the following is not a characteristic of spillage (a) water from the factory (b) Oil from the factory (c) Water from the farm (d) Oil from the Farm

7. Insecticides are (a) insect that bits people (b) Use for making medicine (c) used for farming (d) used for killing insect

8. Air is said to be polluted when (a) when you cannot breather (b) when the air is saturated with waste (c) when the air is not blowing (d) when the air is blowing too fast.

9. The following are sources of air pollution except (a) Burnt paper (b) burnt grass (c) dead animals (d) rainfall

10. Which of the following is not an effect of air pollution (a) acid rain (b) global warming (c) greenhouse effect (d) rainfall

11. Which disease is the consequence of air pollution (a) Blindness (b) cancer (c) diarrhea (d) malaria?
12. The following animals can be found in fresh water habitat except (a) fish (b) frog (c) tortoise (d) cow

13. These diseases can be caused by drinking contaminated water except (a) scabies (b) river blindness (c) malaria (d) bilharzia

14. Which of these is not a characteristic of pure water (a) colorless (b) odorless (c) hard (d) tasteless

15. A vector is (a) a means of measurement (b) man of carrying disease (c) name of a disease (d) none of the above

16. The following disease are transmitted through a vector except (a) yellow fever (b) river blindness (c) sleeping sickness (d) madness

17. Clean water is obtained from the following except (a) well (b) stream (c) river (d) gutter

18. Acid rain is caused by (a) water pollution (b) air Pollution (c) Acid from the laboratory (d) insecticides

19. Hard water is not one of the following (a) drinkable (b) does not form lather with soap (c) is an industrial waste (d) contaminated water

20. Unclean water is found from the following except (a) gutter (b) stagnant water (c) well (d) flood

21. The waste substance which cause the pollution are called (a) polutes (b) pollunations (c) pollutants (d)pollutions

22. The following disease are transferred through direct contact except (a) measles (b) malaria (c) small pox (d) scrabies

23. The following are disease prevention except (a) defication (b) sanitation (c) Immunization (d) health education

24. A healthy environment (a) has dirt all over (b) has unpleasssant smell (c) has a neat toilet (d) harbour rats and cockroaches

25. An advantage of personal cleanliness is (a) good health (b) month odour (c) smelly clothes (d) friends avoiding you.

26. Which of the following is not a cleaning agent (A) water (b) duster (c) sweet (d) soap

27. Which of the following vector transmits rabies (a) mosquito (b) rat (c) Housefly (d) Tsetsefly

28. The following are gaseous air pollutant except (a) Ammonia (b) dust (c) smoke (d) insecticide

29. You can control gaseous air pollutants by (a) good sanitation (b) cutting trees (c) plotting trees (d) sleeping with net.

30. Solid air pollutant include (a) Carbonadoed (b) lead dust (c) sulphur dioxide (d) smoke

APPENDIX III

MAKING SCHEME FOR BASIC SCIENCE PERFORMANCE TEST

1A

2 A

3C

4C

5D

6C

7D

8B

9D

10D

11B

12D

13C

14C

15D

16D

17D

18B

19A

20C

21C

22B

23A

24C

25A

26C

27B

28A

29C

30B

Total = 1mk x20=20 marks

APPENDIX IV:

RATING SCALE FOR OBSERVING STUDENTS' CLASSROOM BEHAVIOURS

Instructions: Indicate how frequently the students' behaviours occur in the classroom by ticking ( ) in the appropriate column.

S/No	Students Behaviour	Frequently	Occasionally	Rarely	Never
1.	Poor self esteem				
2.	Always sit at the back				
3.	Short attention and concentration span				
4.	Cheerful				
5.	Answer questions				
6.	They want the teacher to be polite and sweet				

APPENDIX V:

KUDER RICHARDSON TEST CLASSROOM PSYCHO-SOCIAL FACTORS

Items	P	q	p * q
Q1	0.23	0.77	0.18
Q2	0.37	0.63	0.23
Q3	0.60	0.40	0.24
Q4	0.57	0.43	0.25
Q5	0.13	0.87	0.12
Q6	0.60	0.40	0.24
Q7	0.50	0.50	0.25
Q8	0.33	0.67	0.22
Q9	0.47	0.53	0.25
Q10	0.40	0.60	0.24
Q11	0.23	0.77	0.18
Q12	0.57	0.43	0.25
Q13	0.30	0.70	0.21
Q14	0.33	0.67	0.22
Q15	0.30	0.70	0.21
Q16	0.27	0.73	0.20
Q17	0.43	0.57	0.25
Q18	0.27	0.73	0.20
Q19	0.47	0.53	0.25
Q20	0.23	0.77	0.18
Q21	0.53	0.47	0.25
Q22	0.33	0.67	0.22
Q23	0.43	0.57	0.25
Q24	0.23	0.77	0.18
Q25	0.47	0.53	0.25
Q26	0.10	0.90	0.09
Q27	0.40	0.60	0.24
Q28	0.60	0.40	0.24
Q29	0.20	0.80	0.16
Q30	0.33	0.67	0.22
Sum			6.44

$r = \sum pq/100$

$r = \frac{6.44}{10} = 0.644$

APPENDIX VI:

RELIABILITY TEST

S/N	F1	D1	REMARK
1.	0.32	0.40	
2.	0.20	0.41*	discarded
3.	0.51	0.70	
4.	0.21	0.28*	discarded
5.	0.40	0.41	
6.	0.42	0.41	
7.	0.42	0.46	
8.	0.45	0.50	
9.	0.22	0.33*	discarded
10.	0.30	0.71	
11.	0.40	0.52	
12.	0.20	0.31*	discarded
13.	0.40	0.70	
14.	0.50	0.72	
15.	0.90	0.91**	discarded
16.	0.30	0.5	
17.	0.92	0.93**	discarded
18.	0.31	0.61	
19.	0.35	0.60	
20.	0.41	0.70	
21.	0.31	0.79	
22.	0.40	0.61	
23.	0.30	0.70	
24.	0.39	0.69	discarded
25.	0.86	0.88	
26.	0.48	0.65	
27.	0.89	0.624	discarded
28.	0.42	0.60	
29.	0.82	0.582	discarded
30.	0.52	0.78	discarded
31.	0.41	0.61	
32.	0.55	0.60	
33.	0.35	0.61	
34.	0.45	0.61	
35.	0.45	0.60	
36.	0.43	0.70	
37.	0.51	0.79	
38.	0.45	0.61	
39.	0.31	0.70	
40.	0.49	0.69	

Ten questions were discarded from the instrument between 4 i.e. question 2, 4, 9 and 12 were found to be very difficult below 0.3 scores hence rejected while question 15, 17, 25**, 29 and 30 were also dropped because they were found to be very simple, that is those above 0.70.

APPENDIX VII

LETTERS OF VALIDATION OF THE RESEARCH INSTRUMENTS

LETTER 1

Department of Science Education

Ahmadu Bello University, Zaria

20th January, 2018

Dr. Mrs. Olajide

Department of Science Education

Ahmadu Bello University, Zaria

Dear Sir,

VALIDATING INSTRUMENT OF P15EDSC8023: CYRIL, AGNES IKECHI

The above named postgraduate student is researching on "Analysis of Classroom Psycho-Social Factors as Predictors to Slow-Learners' Academic Performance in Basic Science in Funtua Zone Katsina, Nigeria."

She has developed/adopted the following instrument for data collection

1. Basic Science Performance Test
2. Basic Science Classroom Environmental Scale Questionnaire
3. IQ Test and Observation.

Sir, objectives of the study, research questions and null hypotheses of the study are enclosed herewith for your reference.

Kindly validate the instruments above with reference to Content of the Instruments (Basic Science and technology) used to enable the student use them to collect data. I am extremely grateful for your co-operation. Thank you.

Yours Faithfully,

Prof. S.S Bichi

LETTER 2

Department of Science Education

Ahmadu Bello University, Zaria

20th January, 2018

Prof. Atadoga

Department of Science Education

Ahmadu Bello University, Zaria

Dear Sir,

VALIDATING INSTRUMENT OF P15EDSC8023: CYRIL, AGNES IKECHI

The above named postgraduate student is researching on "Analysis of Classroom Psycho-Social Factors as Predictors to Slow-Learners' Academic Performance in Basic Science in Funtua Zone Katsina, Nigeria."

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Sir, objectives of the study, research questions and null hypotheses of the study are enclosed herewith for your reference.

Kindly validate the instruments above with reference to Content of the Instruments (Basic Science and technology) used to enable the student use them to collect data. I am extremely grateful for your co-operation. Thank you.

Yours Faithfully,

Prof. S.S Bichi

LETTER 3

Department of Science Education

Ahmadu Bello University, Zaria

20th January, 2018

Prof. J. Daura

Department of Arts and Social Science Education

Ahmadu Bello University, Zaria

Dear Sir,

VALIDATING INSTRUMENT OF P15EDSC8023: CYRIL, AGNES IKECHI

The above named postgraduate student is researching on "Analysis of Classroom Psycho-Social Factors as Predictors to Slow-Learners' Academic Performance in Basic Science in Funtua Zone Katsina, Nigeria."

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