ASSESSMENT OF AVAILABILITY AND MAINTENANCE OF SCHOOL PLANT IN SECONDARY SCHOOLS IN ZARIA EDUCATION ZONE, KADUNA STATE, NIGERIA

BY

Anthony Osorochi NWENEKA

DEPARTMENT OF EDUCATION FOUNDATIONS AND CURRICULUM, EDUCATIONAL ADMINISTRATION AND PLANNING SECTION, AHMADU BELLO UNIVERSITY, ZARIA

NOVEMBER, 2016

ASSESSMENT OF AVAILABILITY AND MAINTENANCE OF SCHOOL PLANT IN SECONDARY SCHOOLS IN ZARIA EDUCATION ZONE, KADUNA STATE, NIGERIA

BY

Anthony Osorochi NWENEKA
B. A. HONs ENGLISH 2004
M.ED/EDUC/24037/2012-2013

A DISSERTATION SUMBITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,
AHMADU BELLO UNIVERSITY, ZARIA.

IN PARTIAL FULFILLMENT OF THE REQUIRMENT FOR THE AWARD OF MASTER'S DEGREE IN EDUCATIONAL ADMINISTRATION AND PLANNING

DEPARTMENT OF EDUCATION FOUNDATIONS AND CURRICULUM, EDUCATIONAL ADMINISTRATION AND PLANNING SECTION, AHMADU BELLO UNIVERSITY, ZARIA

NOVEMBER, 2016

DECLARATION

I hereby declare this dissertation titled "**Assessment of Provision and Maintenance of School Plant in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria",** has been written and produced by me. The research has not been presented on any previous application for a higher degree. All sources have been dully acknowledged.

_____ _____

Anthony Osorochi NWENEKA Date

CERTIFICATION

This dissertation entitled **"Assessment of Provision and Maintenance of School Plant in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria",** by Nweneka Anthony Osorochi meets the regulation governing the Award of the Degree of Master of Education (M.Ed) in Educational Administration and Planning of Ahmadu Bello University, Zaria and approve for its certification to knowledge.

_____ _____

Prof. B. A. Maina Date
Chairman, Supervisory Committee

_____ _____

Dr. E.I. Makoju Date
Supervisor, Supervisory Committee

_____ _____

Prof. B. A. Maina Date
Head of Department
Educational Foundations and Curriculum

_____ _____

Prof. K. Bala Date
Dean, School of Post Graduate Studies

DEDICATION

I most sincerely dedicate this dissertation work to my family and mentors who gave me immeasurable assistance to carry out this research work successfully especially my Wife who has been all supportive.

ACKNOWLEDGEMENTS

My profound gratitude goes to God Almighty, who made it possible for me to complete this research work successfully despite all constraints. My sincere gratitude also goes to my supervisors Prof. B. A. Maina and Dr. E. I. Makoju, whose encouragement, concern, advice, relentless support and exceptional patience saw me through the period of the study. I most sincerely acknowledge all lecturers that impacted on me during the course of my study for their constructive criticisms and suggestions in improving the quality of my work this is to include Dr Igunnu, Dr Jumare, Dr Hanna, Dr Marouf, just to mention but a few. In addition, I want to acknowledge late Dr. M. O. Dare for his enormous contributions, may God bless the family he left behind.

I also want to use this medium to appreciate my class representative Moses Jonah, who contributed a lot to keep me and other members of the class abreast with relevant information and material. I sincerely appreciate my course mates, Mu'azu Tasi'u, Fumilayo Michael, Amina Lawal, Nda Ishaku Abubakar, Jimoh Abiodun, Olarewaju Oluwatosin, Hajiya Oga Mairo Iliyasu Galadima, Ado Magiji Minjibir, Ahmed, etc for their support.

My immeasurably gratitude goes to everyone who contributed in one way or the other, but whose names were not mentioned here. Thank you very much for supports. God bless you all.

Finally, I am delighted to express my hearty thanks and appreciation to my wife and family for supporting me throughout this programme.

TABLE OF CONTENTS

Title Page		i
Declaration		ii
Certification		iii
Dedication		iv
Acknowledgements		v
Table of Contents		vi
List of Tables		ix
List of Abbreviations		xi
List of Appendices		xii
Abstract		xiii

CHAPTER ONE

INTRODUCTION

1.1	Background to the Study	1
1.2	Statement of the Problem	5
1.3	Objectives of the Study	7
1.4	Research Questions	8
1.5	Research Hypotheses	9
1.6	Basic Assumptions	10
1.7	Significance of the Study	10
1.8	Scope of the Study	12

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1	Introduction	13
2.2	Conceptual Framework	14
2.3	Empirical Studies	45
2.4	Summary	49

CHAPTER THREE

RESEARCH METHODOLOGY

3.1	Introduction	52
3.2	Research Design	52
3.3	Population of the Study	52
3.4	Sample and Sampling Technique	54
3.5	Instrumentation	55
3.5.1	Validity of the Instrument	56
3.5.2	Pilot Testing	56
3.5.3	Reliability of the Instrument	57
3.6	Administration of Research Instrument	57
3.7	Procedure for Data Analysis	57

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1	Introduction	59
4.2	Bio-Data of the Respondents	59
4.3	Answer to Research Questions	62
4.4	Hypotheses Testing	78
4.5	Summary of Hypotheses Testing	85
4.6	Summary of Major Findings	86
4.7	Discussions of Findings	87

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1	Introduction	94
5.2	Summary	94
5.3	Conclusions	96
5.4	Recommendations	97
5.5	Suggestions for Further Studies	98
REFERENCES		99
APPENDICES		107

LIST OF TABLES

Table 1:	Population Distribution	53
Table 2:	Summary of Number of Schools in Each Zone	54
Table 3:	Sample Size Distribution	55
Table 4:	Status of the Respondents	59
Table 5:	Gender of the Respondents	60
Table 6:	Educational Qualification	60
Table 7:	Age of the Respondents	61
Table 8:	Years of Experience as Principal	61
Table 9:	Location of School	62
Table 10:	Opinions of Officials of MOE, Principals and Teachers on the Availability of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State	63
Table 11:	Opinions of Officials of MOE, Principals and Teachers on the maintenance of teaching facilities available in secondary schools in Zaria Education Zone, Kaduna State.	65
Table 12:	Opinions of Officials of Ministry of Education, Principals and Teachers on the Availability learning facilities in secondary schools in Zaria Education Zone, Kaduna State.	67
Table 13:	Opinions of Officials of Ministry of Education, Principals and Teachers on the maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State	69
Table 14:	Opinions of Officials of Ministry of Education, Principals and Teachers on the Availability of Games and Recreational Facilities in Secondary Schools in Zaria Education Zone, Kaduna State	71
Table 15:	Opinions of Officials of Ministry of Education, Principals and Teachers on the Maintenance of Games and Recreational Facilities in Secondary Schools in Zaria Education Zone, Kaduna State	73

Table 16:	Opinions of Officials of Ministry of Education, Principals and Teachers on the Availability of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State	75
Table 17:	Opinions of Officials of Ministry of Education, Principals and Teachers on the Maintenance of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State	77
Table 18:	Summary of Analysis of Variance (ANOVA) on the Availability of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.	79
Table 19:	Summary of Analysis of Variance (ANOVA) on the maintenance of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.	79
Table 20:	Summary of Analysis of Variance (ANOVA) on the Availability of Learning facilities in secondary schools in Zaria Education Zone, Kaduna State.	80
Table 21:	Summary of Analysis of Variance (ANOVA) on the maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State.	81
Table 22:	Summary of Analysis of Variance (ANOVA) on the Availability of Welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.	81
Table 23:	Summary of Analysis of Variance (ANOVA) on the maintenance of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.	82
Table 24:	Summary of Analysis of Variance (ANOVA) on the Availability of Recreation and Games facilities in secondary schools in Zaria Education Zone, Kaduna State.	83
Table 25:	Summary of Analysis of Variance (ANOVA) on the maintenance of Recreation and Games facilities in secondary schools in Zaria Education Zone, Kaduna State.	84
Table 26:	The summary of the eight hypotheses tested for the study	85

LIST OF ABBREVIATIONS

F.R.N.:	Federal Republic of Nigeria
M.O.E.:	Ministry of Education
T.V.C.:	Technical Vocational Education
N.P.E.:	National Policy on Education
W.H.O.:	World Health Organization
M.D.Gs.:	Millennium Development Goals
S.P.S.S.:	Statistical Package for Social Sciences
N.C.E.:	Nigeria Certificate of Education

LIST OF APPENDICES

Appendix I: Letter of Introduction 107

Appendix II: Perceptions of Stakeholders Questionnaire 108

Appendix III: List of Schools in Zaria Education Zone, Kaduna State 113

Appendix IV: List of Schools Used for the Research 115

ABSTRACT

This study on the assessment of provision and maintenance of school plant in secondary schools in Zaria Education Zone Kaduna State, was conducted to examine the adequacy in the provision and maintenance of school plant facilities. Anomalies in the quality and adequacy of school plant facilities in most secondary schools in Zaria Education Zone have been observed. This is to include lack of teaching facilities, inadequate learning facilities, lack of games and recreational facilities, lack of welfare facilities, etc. The inadequacies of these facilities are believed to have effect not only on teaching and learning process but also students' performance. The purpose of the study is to find out the state of school plant facilities in Zaria Education Zone and the frequency and impact of maintenance carried out on the facilities by school administrators. The aim and objective of the study is to assess the provision and maintenance of school plant in secondary schools in Zaria Education Zone, Kaduna State, Nigeria with a view to making recommendations. Significantly, this study is believed to assist in Education planning and budgeting process in Kaduna State and contribute to the wealth of knowledge. The review of related literature was made based on conceptual framework. Some of the concepts considered include; provision, maintenance of teaching facilities, learning facilities, games and recreational facilities and welfare facilities. The study adopted the descriptive survey design. The population comprised 1436 Teachers, 46 Principals and 35 Staff of Ministry of Education in Zaria Education Zone. A sample size of 380 respondents, which represents 25% of the population was used to administer a self designed 80-item questionnaire. The instrument was validated through a pilot study that involved the administration of Thirty Eight (38) copies of questionnaire on the respondents which were all teachers from four secondary schools and reliability coefficient computed at 0.729. The purpose of the pilot study was to determine the reliability of the instrument. Eight research questions were raised and eight hypotheses guided the study. Data were analyzed using means, standard deviation and Analysis of Variance (ANOVA) at 0.05 level of significance. Findings revealed that school facilities in the secondary schools in Zaria Education Zone are generally in a state of dilapidated. The findings revealed that school plant facilities were provided and maintained. Conclusions drawn include that school plant facilities should be regularly provided and maintained to enhance effective teaching and learning process. Finally, it is recommended that teaching, learning, game and recreational and welfare facilities are needed for effective teaching and learning process to take place. Consequently, government should provide these facilities and the funds for maintenance while principals should maintain the school plant facilities provided.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

This study focuses on availability and maintenance of school plant which includes the school buildings, grounds, service facilities and other structures that make up a school in order to make sure that teaching and learning take place effectively with little or no interruption. The major aim of this study is to identify the required school plant facilities, ascertain whether they are provided and whether the knowledge, skills, and competences that are necessary for maintaining a school plant are provided. The quality of education delivered by teachers and the academic achievement of pupils of any school is dependent on several factors of which school plant facilities is paramount. School plant facilities are materials resources that enhance teaching and learning thereby making the process meaningful and purposeful. School facilities can be referred to as school plant. School facilities can be defined as the entire school plant which school administrators, teachers and students harness, allocate and utilize for the smooth and efficient management of any Education institution, for the main objective of bringing about effective and purposeful teaching and learning experience.

According to Adeboyeje (2000) and Emetarom (2004), school facilities are the physical and spatial enablers of teaching and learning which will increase the production of results. School facilities serve as pillars of support for effective teaching and learning. Oyesola (2000) posits that school facilities include permanent and semi-permanent structures such as machinery, laboratory equipment, the blackboard, teacher's tools and other equipment as well as consumables. Good quality and standard of school depend

largely on the provision, adequacy, unitization and management of education facilities. Akinsolu (2004) asserted that Education curriculum cannot be sound and well operated with poor and badly maintained school facilities. From all indication, school facilities are physical resources that facilitate effective teaching and learning. They include blocks of classrooms, laboratories, workshops, libraries, equipment, consumables, electricity, water, visual and audio-visual aids, tables, desks, chairs, play ground, storage space and toilets.

In Nigeria, public school enrolment has continued to increase without a corresponding increase in facilities for effective teaching and learning. As a result of underfunding of education in Nigeria, the government has been encouraging proper maintenance of available school facilities. School plant management entails ensuring that the facilities are kept near their original state as possible. This involves keeping the school sports and football field clean, periodic renovation of the buildings, servicing the school bus and generator sets, repairs etc. for the purpose of restoring the facilities to optimum working condition. Olagboje (1998) sees school plant maintenance as any work carried out on any component of the plant with a view to keeping it at good working condition. According to Hinum (1999) the quality and durability of a building largely depend on the type and level of servicing, repairs and the rate at which the needs and requirement change. School facilities management involves keeping records of the facilities, supervising the facilities, planning for the facilities, motivating students and teachers to participate in facilities maintenance and evaluating the available facilities.

Adeboyeje (2000) reported that schools with well coordinated plant planning and maintenance practices recorded better students performance. Burkett and Bowers (1987) reported that students in newer and adequate school facilities schools outperformed

students in older and inadequate school facilities. Conducive school physical environment could enhance students' school attendance, involvement in academic activities and academic performance positively.

In addition, Adesina (1999) stressed that the quality and quantity of education facilities available within an education system positively correlates with the quality and standard of the education system. Durosaro (1998) examined school plant planning in relation to administrative effectiveness of secondary schools in Oyo state of Nigeria. He found that schools that planned and maintained their facilities had higher students' retention and is more effective than the others. Many scholars, researchers, administrators and education planners have confirmed that school facilities in Nigerian schools are inadequate and few available ones are being over utilized due to the astronomical increase in school enrolment. Ikoya and Onoyase (2008) reported that only 26% of secondary schools across the country have school infrastructures in adequate quality and quantity. Ajayi (1999) reported that most of the Nigerian schools are dilapidated due to inadequate funding while most tertiary institutions are living in their past glories. Such situation hinders effective teaching and learning, making the process rigorous and uninteresting to students and teachers. Similarly, Owuamanam (2005) noted that the inadequacy of infrastructural facilities and lack of maintenance for available facilities were major problems facing Nigerian education system. The school facilities are grossly inadequate to match the student's population and the available facilities were poorly maintained. The availability and maintenance of school facilities will enhance teaching and learning and improve academic performance of students.

Researchers like Wilcockson (1994), Lawal (1996), Ajayi (1999) and Owoeye (2000) have long identified the importance of school facilities in teaching and learning while the inadequacy, deterioration and lack of maintenance of these facilities will spell doom for the teachers and students in the teaching and learning activities. Negligence in the maintenance of school facilities has much negative consequences. When school facilities are not well managed and maintained, they constitute health hazards to pupils and teachers who use the facilities. For instance Ogonor (2001) reported the killing of pupils and teachers of a primary school in Nigeria when the school walls and roofs collapsed. Even large amount of money invested on school facilities are wasted when school buildings and equipment are left to deteriorate without maintenance.

It has been observed that school facilities in Kaduna State are not been maintained by school administrators and hence their depreciation. The administrators appears to spend much time on instructional planning, curriculum development, personnel development and community relations claiming that the management and maintenance of school facilities is the sole reserves of the government. It is also believed the condition of the school plants in Kaduna State is discouraging and contributes to students' lack of interest in education. This to a large extent must affect their performance. It is against this background that this study will examines school facilities in public secondary schools in Zaria Education Zone, Kaduna, Nigeria with focus on the state of the facilities, the adequacy of the maintenance provided, factors encouraging school facilities depreciation and the roles of school administrators in the management and maintenance of school facilities.

1.2 Statement of the Problem

Education system in Nigeria has contributed in no small measure to support the nation's economy through the provision of qualitative man power and acquisition of knowledge, skills and values. In achieving this, in the 21st century, it has been nightmares due to the poor state of school plant facility which are poorly manage, out of use, aged and not conducive for teaching and learning process.

It has been observed that most schools especially public schools are poorly managed. These schools have become sorry sites. Specifically you notice dilapidated buildings with leaking roofs, broken chairs and desks, rough floors and windows without louvers and bushy compound. In some of the schools, the buildings are dirty, no lightning while some have blown off roofs. The roads leading to the sports field in some schools are weedy. It appears adequate management and maintenance is not provided on the available school facilities.

School facilities are supposed to be kept in good condition near their original state as much as possible by school administrators. But from causal observation and complaints, it appears that school administrators are neglecting on the role of school facilities management and maintenance. Could this observation be the same for all public secondary schools in Zaria Education Zone?

There are specific problems identified that could affect teaching and learning in secondary school. First is lack of basic social amenities in most schools such as electricity, water supply, laboratory, class room etc. Effective and efficient operation of any school is in doubt with absence of school plant management. This adversely creates a discomfort to

the teachers, students and adequate operators of the school's administrative system. Fabunmi (1997) in support of this asserted that school plant facilities when provided will aid teaching and learning programme and consequently improve academic achievement of the students. Indeed, the supply of electricity and pipe borne water in any school building will help for the maximum use of such school plant and vice versa.

Unequal allocation of school plant facility to schools coupled with inadequate funding of school plant is the second factor which has compounded the myriads of problems linked to this study. Facilities form one of the potent factor that contribute to academic achievement in the school system (Hallak, 1990). If therefore, such facilities as school building, classroom, library, laboratory, furniture, recreational equipment and other instructional materials are not evenly distributed to school due to political reasons, lack of funds or for any other reasons. Then, academic performance of students in such schools should not be queried because of the obvious reasons created. In his contributions, Ojoawo (1990) observed that certain schools are favoured in the allocations of facilities at the expense of others.

Also the issue of funding to the sector has continued to receive public criticism in view of its contribution to other sectors of the economy. It is not too surprising with the United Nations recommendations of countries national; budget of 26% to the entire education sector. This perhaps is to keep the system running ways from its perennial instability (problems caused by poor infrastructure, industrial action and so on).

Lastly, perceived failure of the authorities to provide adequate facilities and teaching aids in schools could worsen the situation already created. In addition, poor

school plant management affects teaching and learning process. Zaria Education Zone has been identified as one of the likely areas affected by some of the problems mentioned above. This phenomenon is dangerous to the society and if not controlled, may lead to high rate out half baked students and drop outs in the nearest future. This informs the significance of this study to justify the observations and suggest way forward.

1.3 Objectives of the Study

The study is set to achieve the following objectives:

1. Assess the availability of teaching facilities in secondary schools in Zaria Education Zone.
2. Assess the maintenance of teaching facilities in secondary schools in Zaria Education Zone.
3. Determine the availability of learning facilities in secondary schools in Zaria Education Zone.
4. Determine the maintenance of learning facilities in secondary schools in Zaria Education Zone.
5. Examine the availability of games and recreational facilities in secondary schools in Zaria Education Zone.
6. Examine the maintenance of games and recreational facilities in secondary schools in Zaria Education Zone.

7. Find out the availability of welfare facilities in secondary schools in Zaria Education Zone.

8. Find out the maintenance of welfare facilities in secondary schools in Zaria Education Zone.

1.4 Research Questions

The following questions serve to guide the conduct of this study:

1. What are the available teaching facilities in secondary schools in Zaria Education Zone, Kaduna State?

2. Are the teaching facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

3. What are the available learning facilities in secondary schools in Zaria Education Zone, Kaduna State?

4. Are the learning facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

5. What are the available Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State?

6. Are the Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

7. What are the available welfare facilities in secondary schools in Zaria Education Zone, Kaduna State?

8. Are the welfare facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

1.5 Research Hypotheses

The following are the research hypothesis:

1. There is no significant difference in effect from the availability of teaching facilities in secondary schools in Zaria Education Zone Kaduna

2. There is no significant difference in effect from the maintenance of teaching facilities in secondary schools in Zaria Education Zone Kaduna

3. There is no significant difference in impact from the availability of learning facilities in secondary schools in Zaria Education Zone Kaduna

4. There is no significant difference in impact from the maintenance of learning facilities in secondary schools in Zaria Education Zone Kaduna

5. There is no significant improvement on the availability of welfare facilities in secondary schools in Zaria Education Zone Kaduna State

6. There is no significant improvement from the maintenance of welfare facilities in secondary schools in Zaria Education Zone Kaduna

7. There is no significant improvement from the availability of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna

8. There is no significant improvement on the maintenance of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna

1.6 Basic Assumptions

For the purpose of this study, the following assumptions were made

1. The availability and maintenance of teaching facilities in secondary schools has direct and significant effect on teaching and learning process in Zaria Education Zone.

2. The availability and maintenance of learning facilities in secondary schools has direct and significant impact on teaching and learning process in Zaria Education Zone.

3. The availability and maintenance of welfare facilities in secondary schools has direct and significant improvement on teaching and learning process in Zaria Education Zone.

4. The availability and maintenance of recreational and games facilities in secondary schools has direct and significant effect on teaching and learning process in Zaria Education Zone.

1.7 Significance of the Study

It is believed that the availability and maintenance of school plants translates to growth and development of the process of teaching and learning. The life wire of any Education system is the quality of the school plants. This implies availability of school facilities which occupy a crucial place in the realization of Education goals. All the foregoing implies that provision and maintenance of school plant is necessary for effective and efficient achievement of a common goal. It is hoped that the result of this study will

help to raise the standard of education in schools having made useful suggestions on what is required and how to improve the maintenance of the school plant. This study will hopefully reveal to the government and school administrators the problems facing school plants and how they can be solved using Zaria Education Zone secondary schools, Kaduna State as a case study. To the students, this study is significant because programmes of instruction these days have their specific demand for facilities. The Nigerian education system places much emphasis on academic and technical programmes requiring specialized facilities. As a result, the processing of education inputs (students) would demand for facilities that are at the utmost production. The realization of this lies in a well maintained school plant. The students hopefully will benefit from a conducive and well-equipped environment which is a prerequisite for high academic performance. This study will also serve as a resource material for students to find out the extent and implications of utilization of the suggested strategies and for comparative studies on same topic in another state. The findings of this study will furnish secondary school administrators with more strategies, which will help them achieve desired goals and objectives. Suffice it to say that if the result of this work is implemented, it will assist in education management in secondary schools in Zaria Education Zone. This study will hopefully inform the school authorities and teachers of secondary schools on the need for regular and effective supervision of the school plant. This is necessary since the school is like a manufacturing organization where plants and equipment must be in top operational shape to produce results. Effectiveness on the use of materials is dictated largely by the operationality of the facilities. It is hoped that this work will expose the condition of the plant to the stakeholders whom it is believed will improve the quality and provision of school plant. If

the recommendations of this study are implemented, the government expenditure on material resources in the school will be reduced. This is so since good maintenance of school plant will help to protect their financial investments in the school. It is hoped that this study would provide information, awareness and strategies for educators, most especially managers of school plants, planners, parents, communities, and policy makers with respect to school plants, being that over the years not much has been assessed on maintenance of school plants. More so, this study will create awareness on both teachers and school administrators on the need for good management and maintenance of school plant facilities and judicious usage of the limited available facilities to attain education goals.

1.8 Scope of the Study

This study focuses on the availability and maintenance of school plants in secondary schools in Zaria Education Zone. A total of 20 schools were used to carry out this investigation. The study was restricted to availability and adequacy of material resources in the selected schools. The work also covered the following aspects of school plant facilities:

1. The availability and maintenance teaching facilities;
2. The availability and maintenance of learning facilities.
3. The availability and maintenance of games and recreational facilities.
4. The availability and maintenance of welfare facilities.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

Education is the bedrock and an indispensable tool for individual and collective socio-economic development of a country. Many countries in the world see education as a good investment for national development because it is expected to produce the required quantity and quality of human resources for the socio-economic growth using the mix of inputs. Nigeria, being fully aware of this, desired education as an instrument per excellence in the development of the national economy. This desire has been heightened by the act that the development history of advanced countries such as Britain, America, Germany and France, to mention but a few, is strongly hinged on education (Majasan. 1997 cited by Uchendu et al 2013:16).

Secondary education has been facing several challenges among which include the availability and maintenance of school plant facilities. This reduces the quality of education system, resources and output, especially, if examined comparatively from the set goals and objectives. In view of the present state of available facilities for education, the researchers' prime interest is in assessing the provision and maintenance of school plant facilities in secondary schools. Facilities in this context are; physical resources; the movable and immovable properties, physical structures and assets belonging or allocated to an education institution to enhance teaching-learning process and education services.

One of the fundamental ways of ensuring the optimum realization of education goals and objectives is by the provision and maintenance of school facilities. Also the maximum utilization of available resources for optimum productivity is through a good

maintenance culture. Maintenance culture of any school speaks much about such an institution. According to Akpan (2011) cited by Uchendu et al (2013:16) the general appearance of school facilities constitute the basis upon which members of the public pass their judgments about the academic performance going on in the school.

Several studies have found positive approach to the availability and maintenance of school plants in Nigeria. Research suggests that the prestige of the school a student attends has a positive effect on student's achievement, particularly at the secondary school level. This may be a partial reflection of the students ability in the three domain (-cognitive, affective and psychomotor), driven by the provision of quality human and material resources. In this chapter, a review of related works or contributions of some notable authors were undertaken. This is basically to understand, identify, criticize and analyze the critical variables that are related to the present study. In view of this, the following conceptual framework were reviewed: concept of provision, maintenance, school plant, teaching facilities, learning facilities, games and recreational facilities and welfare facilities in secondary school.

2.2 Conceptual Framework

Provision

Maintenance

School Plant

Provision and Maintenance of School Plant Facilities

Teaching Facilities

Learning Facilities

Games and Recreational Facilities

Welfares Facilities

2.2.1 Availability

The term availability in this context is the degree or state or quality of supply of equipment, facilities, amenities, infrastructure, human and material resources, etc for use in a school environment. It is the process of making available the instruments and facilities needed in a school plant for effective and efficient performance of human and material resources which in turn enhances teaching and learning process.

2.2.2 Maintenance

Maintenance literarily is the act of keeping something in good condition by checking or repairing it regularly. Maintenance of facilities implies activities put in place to restore the physical conditions of facilities. Amanchukwu and Ololube (2015:97) opined that school plant maintenance are all activities embarked upon with a view to sustaining initial use value of the school plant. Maintenance is therefore, defined as any action or group of actions taken to keep facilities in good working condition for as long as possible without failing to restore it to its operational state after a failure occurrence. Researchers define maintenance as a culture cultivated to keep the environment and all facilities in school safe, serve the beneficiaries for a long period and be conducive for learning. No doubt, most school infrastructural facilities are over stretched due to astronomical rise in students' population. However, some of the activities needed for maintenance include:

1. Repairs of broken furniture, leaking roofs or blown off roofs for teaching-learning efficiency.
2. Cleaning of the doors, windows, cobwebs on the ceiling roof and walls e.t.c.
3. Sweeping the floor or grounds.

4. Cutting of grass in the surrounding; and in the field for games.
5. Renovation of dilapidated buildings and construction of new classrooms (http/www.dilapi.build.com).
6. Cleaning of drainage system to allow free flow of water during rainy season.

Olagboye (1998) and Ajayi (2007) cited in Amanchukwu and Ololube (2015:99), having worked independently, and identified five types of maintenance in the school system. These are:

a. Corrective maintenance: Repairing of faults on time, for example, electric faults in the school buildings, mechanical faults in generating sets and vehicles etc.
b. Preventive and predictive maintenance;
c. Shut down maintenance; in this case, this must be done when the learners are on vacation so as to avoid accident or unnecessary disturbances.
d. Running maintenance- This is done when the plant or a component of it is operating;
e. Breakdown maintenance: This focuses on rectifying breakdowns in any component of the school plant. For example, the lighting system in the laboratories; this should be attended to instantly so as not to disrupt teaching and learning.

Lack of maintenance of school plant in the Nigerian education institutions is a recurring decimal and the sooner attention is paid in that area the better for the managers of education. It is always better to carry out maintenance as the structure starts wearing off or the signs appear in any aspect of the building or grounds as a whole; leaving it for too long escalates the faults thereby causing more repairs (Amanchukwu and Ololube 2015:99).

Certain issues might affect school plant maintenance in various ways:

a. One of the ways is that initially, it might be that the school plant was put in place to accommodate a certain number of learners. As years roll by, more children are enrolled in the school system and no additional structures were built. Things will start breaking down and learners would start struggling for the few available facilities/equipment. The typical example is when the learners start rushing for a few seats available for their lectures; some of these benches are damaged and at times injuries occurs among the students. This is part of the dilemmas in the classroom as identified by Amanchukwu & Obijuru (2013) in Amanchukwu and Ololube (2015:97). It is absolutely necessary to add more facilities and equipment as population increases to avoid unnecessary disruptions during teaching and learning.

b. Many people claim to know how to repair a lot of things in the school premises and end up doing shabby job that do not last. It becomes obvious that either we do not employ the services of the right people or we are trying to cut corners; that actually create more problems than expected and leads to more wastages.

c. Another important factor is that many Heads of secondary schools do not delegate duties. They want to have an eye on everything that is being done thereby delaying other areas that need urgent attention. There should be decentralization of authority and duty so as to achieve success, since the essence of management is to achieve success.

d. It has been observed that government property suffer a lot of neglect. The users of these properties occasionally feel that they are government property therefore it is

nobody's business. This non-challant attitude must stop so as to dictate faults in good time and adequate and instant repairs made to avoid wastages.

e. Lack of maintenance culture has eaten deep into the fabrics of the nation's citizenry. If the school authorities (Head teachers, teachers) and other workers take care of these properties, learners will emulate them and go a long way preventing damages to those properties. Some school Heads state clearly that even though they dictate these faults in good time the school does not generate enough funds for such repairs. In this case it becomes obvious that they are willing to carry out repairs but the financial resources are not there. At times one discovers that there is lack of cooperation in the school which makes it difficult for the principal to take vital decisions. If the idea is put into vote, the principal might not get enough votes to support his/her noble ideas about what he/she want to do. There should be cooperative attitude among teachers in the Nigerian secondary schools for success to be achieved.

f. It has been established that most of the time the ministry officials fail to attend to the needs of the schools due to lack of funds. The latter is necessary for the smooth running of the school. It is very essential to reserve some funds for emergences at our various schools of learning if education goals will be achieved.

g. Vandalization of school plant is another factor that should be looked into. Schools should teach the learners the culture of maintaining school property, which will help them not to destroy but cherish them. Regular supervision is not carried out by the ministry of education officials regularly and that contributed to the chaotic situation of school plant. When officials from the ministry do their work as and

when due, sorry sight situations will be avoided and school activities will not be interrupted.

h. Irregular attendance of school heads due to the reason that they are on maternity leave does not help matters. A lot of qualified and mature teachers who have passed the age of nursing babies but can afford to attend school, carry out their duties diligently. Their absence causes a lot of delays in taking decisions that affect the running of schools. Amanchukwu and Ololube (2015:99).

i. Public secondary schools in every state of the nation carry a lot of population therefore the school plant should be increased and updated to cue in with the technological learning. Teachers should also be given in-service training on the use of the facilities (ICT) and its maintenance (Ololube et al., 2013 in Amanchukwu and Ololube, 2015:99).

2.2.3 School Plant

School plant refers to infrastructural facilities of education that includes school buildings (classrooms, assembly halls, laboratories and workshops, libraries etc)(Ogbodo, 1995). They are therefore, structures that facilitate teaching and learning processes in the school. School plant, refers to education facilities both human and materials resources which help to facilitate education program (Hamdallah et al 2013:103).

2.2.4 Availability and Maintenance of School Plant Facilities

Yusuf (2008) cited by Amanchukwu and Ololube (2015:96), defined school plant as space interpretation of the school Curriculum. It will be impossible for the curriculum to be implemented if the physical facilities required for teaching and learning are not available. Absence of school plant makes teaching ineffective and desired learning will not

take place. It becomes necessary to ensure that such plant is properly planned and maintained to facilitate the effectiveness of school system. The writer expresses that in some state secondary schools the classrooms are jam packed with children and, of course, poor teaching and learning manifests itself. Teachers could not move around to give the learners individual help where needed because there is no space in between the benches in the classrooms (Teaching Practice supervision experience).

In collaboration, Ajayi (2007) and Yusuf (2008) cited by Amanchukwu and Ololube (2015:96), maintained that school plants comprise the machinery which in turn includes machines and tools used in the workshop, in addition to duplicating machines. They also pointed out that school site, which is the landscape on which the school's permanent and non-permanent structures are built, are part of school plant. They also included buildings, equipment, furniture, vehicles of various types, electrical fittings, books, water supply infrastructure, and accessories like playgrounds, lawns, parks and farm, as part of school plant. The writer is lending her opinion by saying that school plant is all embracing in the fact that it comprises every single item starting from the gate of the school to the walls covering the school compound. This should be drawn into the ears of the school children who did not know that the school ground and everything in it belong to them and they should take good care of them.

Castaldi (1977) in his own contributions was of the opinion that school plants are those things which enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is possible when they are not provided. These facilities are therefore related directly to school curriculum. The programmes of the school are expressed as they were through the school site, the buildings, play grounds, the arrangement and design of

the building etc. He also emphasize that excellent school facilities and dedicated teachers are the basic ingredient of a good education program. Similarly, Nwagu (1978:63) state that class rooms constitute the most basic facilities that every school must have. He pointed to the Nigerian situation where many school buildings and facilities have been constructed without enough consideration for the comfort of students' and teachers' who use them.

According to Ukeje, Akabogu and Ndu (1992) cited by Uchendu et al 2013:16, maintenance of the plant is defined as those activities connected with keeping the buildings, equipment and surroundings at their original or best condition of completeness and efficiency, either through repairs or replacement. Bloom, (1978), opines that a well designed functional school building with a wide array of teaching and learning aids provide effective delivery of the schools' curriculum and positively related to quality assurance in academic performance. Onyene (2000), posits that in any institution, the basic focus is on plant and administration of facilities. This is so because effective and efficient running of the system, proper maintenance and use of the structural units and facilities are quite accurate and imperative**.** The quality of education received by the students bears direct relevance to the availability or lack of physical facilities and the overall environment in which learning takes place. Availability of adequate and sufficient school plant, when properly planned and maintained is thus expected to reflect positively in the academic performances of students (Hamdallah et al 2013:104)

In this emphasis on the importance of school plant facilities maintenance, Tawgaw (1987) cited by Uchendu et al (2013:16) shows that maintenance could be categorized into Emergency and Periodic. Emergency maintenance is called for by the situation of events, and areas such as: structural problem, equipment amendable to periodic inspections,

plumbing facilities including sanitary accessories. Including here also, are: doors, windows, louvers, cracked walls, leaking roof, etc. Another type of maintenance is the method. This concerns facilities which follow repairs and renovating cycle. It could be in days, weeks, monthly or yearly. This type of maintenance is often accomplished by substitution of new parts or materials for old and worn – out ones. It does not entail the substitution of completely new facilities. This is sometimes called "preventive maintenance". Preventive maintenance includes miscellaneous jobs that are required to keep mechanical and electrical equipment operative, the painting of exterior and interior surfaces, repair of doors and windows, reflowing, repair of damage roofs and ceilings. The maintenance of these facilities is gravely necessary in order to avert colossal wastage or their total loss (Uchendu et al 2013:17).

However, proper maintenance culture is an alternative when compared with the financial implications when the few available school plant facilities are culpably allowed to decay. When a school imbibes and assimilates the culture of maintenance of facilities, the institution becomes attractive and is better equipped to deliver the goals. Uchendu (2011) mentioned that proper management of human and material resources enhances teaching and learning in secondary schools. Tawgaw (1987) cited by Uchendu et al (2013:17) clearly puts it that the key to protecting the investment of billions of Dollars committed to education facilities each is proper planning today and the commitment to maintenance and operations thereafter. The necessity of this maintenance culture is succinctly reiterated by UNESCO (1984:11) cited by Uchendu et al (2013:17) that maintenance programmes must satisfy two objectives: The first and most expensive is that of the prevention and deterioration of school buildings furniture executed at predetermined intervals in the life of

every school and deals at each stage, and with specific components of the building. The second, less costly, but in many ways more difficult programmes is that to deal with contingencies, such broken windows, the roof, which leaks, and the drains that block and suddenly overflow.

The societal expectation of quality outputs from the schools makes the students the primary focus of attention, and the better the school, the better it can meet the goals that include equipping the students with desirable skills, knowledge and attitudes that enable them to work and live in the society of knowledge. The teachers are expected to make teaching the learners' centered and create enabling environment for the students to interact with learning materials in order to concretize their knowledge and skills so that they can become self confident and self-reliant, and contribute meaningfully to the socio–economic development of the society. There is actually a general belief that the condition of school's learning environment including infrastructure has an important impact on teachers' effectiveness and students' academic performance. The facilities that are needed to facilitate effective teaching and learning in an education institution include the classrooms, offices, libraries, laboratories, conveniences and other buildings as well as furniture items and sporting equipment. The quality of infrastructure and learning environment has strong influence on the academic standard which is an index of quality assurance in the school. For instance, Earthman (2002), reporting on California, revealed that comfortable classroom temperature and smaller classes enhance teachers' effectiveness and provide opportunities for students to receive more individual attention, ask more questions, participate more fully in discussions, reduce discipline problems and perform better than students in schools with substandard buildings by several percentage points. It is also not

uncommon that facilities in most Nigerian public schools are dilapidated and inadequate to provide quality education service delivery (Sanusi 1998). In the work of Afolabi (2002), while reporting on Ondo state, mentioned that the classrooms in most of the schools were inadequate in terms of decency, space, ventilation and insulation from heat; the incinerators and urinal were not conveniently placed, and the school plant was poorly maintained; these combined deficiencies constituted a major gap in the quality of learning environment, thus the attendant result of non attainment of the set standards and goals in secondary schools.

At times students and teachers find themselves in a physical environment that adversely affects their morale and in some cases, their health and concentration. For instance, if the classrooms are dilapidated, it will create fear for both students and teachers during teaching and learning process. Also if the science laboratory is deteriorated, practical would be conduct half hazardly. More so, if the toilet is bad, the odour will convey sickness to both students and teachers. When a school building is in disrepair, students' achievement suffers, e.g. a swinging door classroom with broken glass windows is a source of danger to students when they run up and down in the class. People are affected and influenced by their environment.

Education facilities are indispensable as far as the industry is concerned. They are essential for the well being and comfort of teachers' and the students' in the teaching-learning process. School plant according to Dare (2010) should be properly planned, developed and maintained in order to ensure its relevance to the school curriculum and its effective teaching and learning in any education institutions. Cutis (1999), opines that school plants are the treasurable assets of the school through which effective teaching and

learning can take place and be promoted. Emphasizing on the importance of infrastructural facilities on the curriculum drawn to the school plant type, he reiterates that it helps to determine to a large extent the nature of school plant needed.

Kochler; (1978:294) in his own views, submits that "there are no two opinions on the idea that a school building must be spaciously planned, functional and with pleasing architectural feature". He further stated that buildings are to education as the body to the mind. This is to say that adequate infrastructure makes a quality school and poor infrastructural facilities make a poor school. From the above assertion, we can agree that a school should be housed in quality infrastructural facilities which are not only stimulating teaching and learning process but also vital centers of community life. This can only be achieved through excellent planning of school facilities. School facilities encompass both temporary and permanent structures of school sites. School facilities consist of basic system and structures which a viable school needs in order to function effectively and to fulfill the purpose to which it was established. Infrastructural facilities include buildings such as administrative block, (which comprises of the principals' office, vice principal and staff rooms, classrooms) laboratories, stores, sick-bay, records office, school shop, library, music room, cafeteria, intro technology laboratory, security post staff quarters' and school farm as well as storage house, electricity, water supply, sport field. Importance should be given to the management of school infrastructural facilities not only through planning or construction of new buildings/schools but also with the maintenance of existing facilities. Maintenance therefore involves maintaining items – buildings, furniture and equipment as far as is possible in their original condition (UNESCO, 1984).

The school learning infrastructure refers to the site, building, furniture and equipment that contribute to a positive learning environment and quality education for all students. The quality of learning facilities available within an education institution has positive relationship with the quality of teaching and learning activities which in turn leads to the attainment of goals set. The quality of the school buildings and furniture will determine how long such will last while comfortable classrooms and adequate provision of instructional resources facilitate teachers' instructional task performance and students' learning outcomes. The total development of the learners in the cognitive, affective and psychomotor domains of learning can only take place in an environment that is conducive to teaching and learning. The appropriate school physical facilities are indispensable in the education process, where the school is located therefore, determines to a large extent the academic standard of a school. The school should be located where it is accessible and far from disturbance of markets, highways, airports and industries and free from filth and pollution. The environment of the school should stimulate, motivate and reinforce students' attendance in school. Comfortable classroom temperature and low noise level have positive influence on teachers' effectiveness and students' academic performance. Ogundare (1999) and Olagboye (2004), viewed utilization of school infrastructure and learning environment as the extent of usage of school buildings, laboratories, library, assembly-ground, flower garden, school garden, volleyball field, chairs, desks, chalkboard, and so on. However, too much pressure on their use could result in over utilization, a situation that could lead to rapid deterioration and breakdown. For instance, when a classroom built to accommodate 40 students is constantly being used for 60 students then the returns from these facilities may not be maximized in terms of teaching and learning.

Comfortable learning facilities will not only boost the morale of teachers and students but will also ensure the realization of the set education objectives in secondary schools.

Adequate maintenance of school infrastructural facilities helps to elongate its lifespan and effective utilization. Knezevich (1975) as cited in Dare (2010) stated that the time it takes for a building to become physically obsolete depends on the quality of the original construction and materials as well as the quality of facility keeping and maintenance. The constituents of school physical environment include building and scrape parking lot, play ground, sport field, agricultural farm, fire extinguisher, school bus, car park and sand bath. Also school facilities include mechanical material like technological machines, generators, photocopier machines, computer machines, plumbing materials like water taps, bore holes, electrical telecommunication like speakers, radios, network system, security and fire suppression systems. Cho (1991) defines maintenance as a programmed, set of actions, activities or processes undertaken to keep any thing (equipment, material or facility) in "as new" a condition as possible to sustain maximum functionality, guarantee safety, usability and lifespan for intended services. It could also be the act of making a state of situation continues as far as the usage of a particular school facilities are concerned. This involves an act of taking proper care of equipment by strictly being guided by specific regulations governing the use of such equipment.

2.2.5 Teaching Facilities

Teaching facilities are some of the materials used to enhance teaching process in a school. Some these materials include;

1. Class Room
2. Chalk Board

3. Laboratory
4. Chairs
5. Tables
6. Public Address system
7. Flip Charts
8. Models
9. Specimens
10. Workshops

Instructional facilities are teaching materials and equipment, that comprises laboratory equipments, introductory technological equipment, wall clock, puzzles, television, radio, VCD plates and players, piano flute, chalkboard, cardboards, duster apparatus for science practical, models, picture charts etc. The provision and maintenance of these teaching instruments is very essential. Equipment and materials are necessary for efficient learning. Ozigi (1977) pointed out that every school needs a wide range of education equipment such as textbooks, laboratory, workshop and workshop equipment, audio-visual materials and items of furniture among others to aid the performance of its operation. According to Castaldi (1977:3) the recent advances in the field of education psychology and electronic programming have stimulated the development of wide variety of effective teaching aids which had and still have profound effect on modern education thinking. Castaldi (1977:9) further affirms that one of the first forms of teaching aids appeared at the turn of the 20^{th} century in the form of an arch pattern and the next generation of teaching aids marked the beginning of a wide spread use of supplementary instructional devices. Whatever the government policies maybe, it is the responsibility of

the school head (principal or head master as the case maybe) to put the furniture, equipment, buildings and playing grounds in good condition. A good environment reinforces the efforts of the teacher by providing a good stimulus for effective teaching and learning to take place. Such a stimulus is not only provided by ensuring good physical plant planning but also through proper maintenance of such physical facilities. A good school environment where good working facilities exist is a catalyst for effective teaching and learning. In a school where there is enough space for the teachers to walk round in the classroom while delivering lesson will promote rapt attention of students and good academic performance. A good school environment presents learning as a lifelong enterprise and enables students to discover appropriate value system that can be their compass for self-awareness and national consciousness.

Okonjo (2002) in Ifeakor and Okoli (2010:374) admitted that quality of education is declining as a result of increased enrolment and/or reduced funding. Many science lecturers are poorly motivated, some lack the technical skills in the use of these new technological devices, hence are not enthusiastic in their teaching. For the fact that some lack the technical skills in the use of new technological resources, they shy away from using them. This situation in Nigerian universities does not differ remarkably from what obtains at the secondary education level. For instance, Okoli and Osuafor (2008) and Ifeakor (2008) in Ifeakor and Okoli (2010:377) reported a similar situation on the state of material resources in secondary schools. From their respective studies they found out that resources are poorly provided and underutilized by science teachers in secondary schools. A study conducted by Hussain, Iqbal and Akhtar (2010) on public school in Islamabad in Pakistan revealed that teaching through technology based learning environment enhanced

the achievement level of the students. To create good schools will take substantial financial resource allocation from the national budget, spent more strategically, with strong political commitment of government to ensure equity and universal access to education.

A school of thought argues that the problem is that of inadequate facilities required for effective teaching and learning of the students that is responsible for the quality of Technical Vocational Education (TVE) graduate produce in Nigeria (Umunadi, 2011 cited by Audu et al 2013:28). However, it is evident that inadequate provision of infrastructural facilities is due to low level of funding of education institutions, particularly TVE institutions in Nigeria and this made it impossible to actually achieve the aims and objectives of TVE as outlined by the Federal Republic of Nigeria (FRN) in the National Policy on Education (NPE) (FRN, 2004). It is also clear that proper installation of equipment in schools workshop cannot be carried out without adequate fund. Consequently, the workshops and laboratories as a means of aiding the teachers of TVE are not properly equipped for practical. Nigeria remains a major defaulter in complying with the UNESCO recommendations that at least 26% of the National budget must be committed to education. The 2013 Federal Government Budget does not reflects any commitment whatsoever on the part of the government towards improving the fortunes of the education sector. Instead, considering the 2013 budget proposal whose size is a whopping N4.92 trillion is about 5 per cent bigger than the 2012 budget, this allocation to education reflects completely the opposite. "Allocation to education only increased marginally from 8.43 per cent last year to 8.7 per cent in the 2013 budget (ERC, 2012). This is still below the UNESCO recommendation. These allocations were not quite adequate, as the institutions had not much to show in terms of adequacy of the facilities

and the maintenance and rehabilitation of the existing ones in most education institutions in Nigeria (Audu et al 2013:28).

Facilities needed to be provided and maintained in schools are materials resources that enhance teaching and learning. These facilities make the process meaningful and purposeful. Facilities in schools can be defined as the entire school plant which school administrators, teachers and students harness, allocate and utilize for the smooth and efficient management of any education institution, for the main objective of bringing about effective and purposeful teaching and learning experiences (Asiyai. 2012 cited by Audu et al 2013:29). According to Adeboyeje (2000); Emetarom (2004) in Audu et al (2013:29), facilities in schools are the physical and spatial enablers of teaching and learning which will increase the production of results. School facilities serve as pillars of support for effective teaching and learning. Teaching facilities include all of the infrastructure and material resources that are used to support the delivery of quality education. Infrastructure refers to basic physical and organisational structures needed for the successful running of the institution (Bakare, 2009 cited by Audu) et al 2013:29). Other relevant facilities in the school environment include text books, laboratory equipment, computer machines, seating facilities, supply of electricity and other technical and vocational facilities which are all paramount to the provision of qualitative education (Omotayo et al 2008 cited by Audu et al 2013:29)

2.2.6 Learning Facilities

Learning facilities are those instruments used for enhance learning activities in schools. Effective management of learning infrastructure is the prime responsibility of the school principal and other stakeholders. The administrative responsibility for satisfactory

physical environment is not limited to providing new facilities. The school heads should direct the available resources to the maintenance of learning facilities. Existing buildings must be maintained and made functional by providing proper lighting, ventilation and temperature condition for their effective and efficient utilization to ensure good working condition (Olagboye, 2004).

Resources in education encompasses all persons and things capable of conveying information, values, processes, experiences and techniques that can be used to actively engage learners in the learning process (Akpochafo, 2003) cited by Ifeakor and Okoli (2010:371). Knowledge and skills require regular updates therefore in this computerized age of learning, the universities are expected to use new technologies like the electronic learning (E-learning) which has been adopted in developed countries to overcome barriers to education opportunity. These technologies are primarily used for communication between people (human to human interaction) otherwise known as communication technologies. These permit communication between teachers and students. Examples include fax, radio, teleconferencing, videoconferencing and the internet. Secondly could primarily be used by individuals on their own (human to computer interaction) called learning resources technologies. These are used to convey subject contents such as print materials, videotapes, audio tapes, television, computer-based course wares or softwares and CD-ROM (Compact Disk – Read Only Memory) (Ifeakor and Okoli 2010:371). This study posits that there is need to introduce this trend at the secondary level especially the e-library to prepare the students better.

School plant, as was already mentioned, involves every single thing within the school premises which should be taken care of in order for efficient services to be realized

in the school system. Maintenance of school plant is an attribute of good leadership. It entails effective monitoring of both the users and the plant itself; applying sound maintenance culture of those facilities and other things required for the school plant to give maximum services (Allen, 2015). In the works of Asiabaka (2008), the fundamental purpose of teaching and learning practice is to bring about in the learner desirable transformation in behaviour through critical thinking. The process does not take place in a vacuum but rather in an environment set aside to facilitate learning. Xaba (2012: 98) supports this view that facilitation of learning ushers in a new dawn in the lives of a learner and the entire community, making it possible for them to be enlisted among those who would develop a nation. Lack of maintenance of school plant in the Nigerian education institutions is a recurring decimal and the sooner attention is paid in that area the better for the managers of education. It is always better to carry out maintenance as the structure starts wearing off or the signs appear in any aspect of the building or grounds as a whole; leaving it for too long escalates the faults thereby causing more repairs.

Efficient management of school physical facilities is mandatory in order to make the school a pleasant, safe and comfortable centre that will increase students' attendance motivation and willingness to participate adequately in both curricula and co-curricular activities (Adeboyeje, 2000). School heads are the custodians of their school plants. It is the responsibility of school heads to ensure that all components of the plant are in good working condition; that they are well protected; and that they are used for the purpose(s) for which they were acquired. It is the duty of the school heads to motivate staff members as well as the students to imbibe and internalize maintenance culture with respect to the school plant and even in personal affairs. The teachers are to assist the school heads in the

maintenance of the school infrastructure and learning environment as this will create conducive teaching/learning environment and enhance their own work. Teachers are to see that every item in their classrooms (the classroom building, furniture, audio-visual and other teaching aids, etc) are in good condition and to promptly report any dilapidation or deterioration to the school head for necessary maintenance action. In earlier studies carried out in Nigeria by researchers, such as, Durosaro (1998), on school plant planning Ayeni, A. J. & Adelabu, M. A. Consortia Academia Publishing and the administrative effectiveness of principals in secondary schools in Oyo revealed that schools that are well planned and maintained had higher student retention and even more effective than others. Buttressing this point, Durosaro (1998) reported that even if the education curriculum is sound and well operated while the school facilities are in disrepair and badly managed, the result of the teaching/learning activities will be negative. This implied that there is a positive relationship between good school environment and effective teaching and learning activities. A similar study by Olutola (1989) on Kwara State revealed that schools adequately provided with the necessary facilities scored higher in their rate of utilization of instructional facilities and performance in West African School Certificate Examination subjects. Nigeria's secondary schools face the combined challenges of deteriorating conditions, out-of-date design and capacity utilization pressures. These combined deficiencies impair the quality of teaching and learning and also create health and safety problems for staff and students. The effects of deteriorating condition and poor maintenance of school infrastructure are threats to school management, curriculum delivery and students' academic performance. The results of Senior School Certificate Examination conducted by the West African Examination Council and the National

Examination Council were extremely poor in Nigeria between 2007 and 2010. The percentage of students who obtained credit level passes in five subjects and above including English Language and Mathematics was about 25% in Nigeria and 35% in Ondo state during the period under review (Bello-Osagie & Olugbamila, 2010; Owadiae, 2010; Quality Education Assurance Agency, Akure, 2010). Also in 2011 May/June Senior School Certificate Examination conducted by the West African Examination Council, only 30.99% of the 1,540,250 candidates obtained credit level passes and above in five subjects including English Language and Mathematics in the 36 States of the Federation, and the Federal Capital Territory (Owadiae, 2011). The abysmal performance of students in examinations had been largely attributed to inadequate learning facilities. This situation has been a source of concern to the school administrators, government and other stakeholders. According to Fafunwa (2010), there is a big gap in quality, resulting from large number of students in crowded classrooms, using inadequate and obsolete equipment and with disillusioned teachers. These combined deficiencies perhaps constituted a major gap in the quality of learning infrastructure, thus, many challenges bear on teaching and learning that prevent the education system from getting the best out of its efforts to achieve the required level of attainment in teaching and learning activities in secondary schools.

Secondary school level is the bridge between the primary and tertiary levels. The importance of secondary education made the federal government to state the broad aims of secondary education as preparation for useful living within the society and for higher education. The underline principle here is that the secondary schools should be able to provide quality secondary education to all those who can benefit from it. However, it appears that the secondary schools are not living up to expectation in discharging its

obligations. Omoregie (2005) in Ekundayo (2010:187) lamented the products of today's secondary system can neither usefully live in the society nor move into higher institution without their parents' aid or forgery. They cannot think for themselves or respect the views and feelings of others. They love no iota of dignity of labour except for things that will give them quick money. It must be stressed that education cannot be an instrument par excellence for achieving national development where the secondary education is not effectively managed to accomplish its aims and objectives. In the administration of secondary schools, the principal is central. He is the man at the helms of the affairs who receives all praises (in terms of success) and blames (in terms of failure). According to Ibukun (1999) cited in Ekundayo (2010:187), the jobs of the school principal in Nigeria has progressively become more complex and highly hazardous. In order to cope with the ever-rising challenges of the system, the school principal must be ready to see himself as a change agent. According to Ajayi (2002a) and Omoregie (2005) cited in Ekundayo (2010:187-188), secondary education in Nigeria is riddled with crises of various dimensions and magnitude all of which combine to suggest that the system is at crossroad.

According to Saiyidain in Sidhu (1999), A school or a college is a vital and life-giving environment to the extent that it brings into the life of its students an abiding love and appreciation for all that is best and most significant in national and human life. Sidhu, (1999) opines that school plant is so important in the life of any education institutions because the children cannot get desired benefit from the school, if they are taught in unhealthy surroundings or if the entire equipment provided them are uncomfortable. The following are some of the facilities that enhance learning;

1. Computer

2. Library
3. Internet/ICT
4. Microscope
5. Projectors
6. Video CD player
7. Audio CD player
8. Text Books
9. Stationeries (Pencils. Eraser, Cleaner, Mathematical set, etc)
10. Exercise Books

The character of school buildings and grounds remain an important elements in the child's education hence schools cannot just be set up everywhere and anywhere because it is not all environments that education can strive. Kochler (1978) asserts that as school heads and their academic staff plan and think together about the present and future needs of school facilities as vital factor that can contribute to the enrolment of students in the school. He further observes that through adequate planning of school facilities, they can determine the type of instructional material teachers' would need for effective instructions and whether the available classroom are adequate for the anticipated number of students.

In his views, Adesina (1980:224) reports that planning of school facilities helps the government and the individual school to avoid wasteful imbalance that arises out of projection based on unreliable data. He adds on that a situation may arise where there are pupils' but no teachers' or pupils' without books, desk and classrooms. This, perhaps, was the case in the few first years following the launching of U.P.E in 1976 and the repackaged U.B.E which is presently on. It influenced school community relationship through the use

of facilities as cultural, civic recreational and youth centres. Also, it promotes child friendliness and effective schooling due to the provision of sanitary facilities, clean spaces, safe drinking water, school shops to buy snacks and drinks.

Momoh (1950:175) is of the view that facilities can limit education programmes, but when properly planned, it can only enhance the day to day learning process, at the same time, pave the way for launching a new education programmes in any school. Therefore, it promotes effective school climate and management. It enhances quality teaching and learning and boosts teachers' and pupils' morale. Jaiyeoba and Atanda (2005) cited in Ekundayo (2010:189) posited that education facilities are those things which enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is possible when they are not provided. The state of infrastructural decay in many secondary schools in Nigeria is a manifestation of poor funding of the system. Ahmed (2003) in Ekundayo (2010:189) revealed that in most of the nation's secondary schools, teaching and learning takes place under a most unconducive environment, lacking the basic materials and thus hindered the fulfilment of education objectives. It is against this background that this study therefore looks into the identified gaps in the provision and maintenance of learning resources, with a view to determining their effect in secondary schools in Zaria Education Zone.

2.2.7 Games and Recreational Facilities in Secondary Schools

Education facilities include recreational facilities such as sporting facilities like indoor, outdoor games, simulation and games, tourism. There are methods that are used to complement the use of recreational facilities for effective teaching learning process in the school system, such methods include; play way, experimentation, dramatization,

demonstration and questioning .It should be noted that any type of recreational activities and methodologies adopted demand effective use of recreational facilities (Ogundele 2012:98). In the school environment, the available education facilities include school plants, which comprise semi-structure and structures that are put in place towards enhancing effectives learning processes. According to Ogundele (2007), in Ogundele (2012: 98), everyone has right to education, and it is a social responsibility that everybody should enjoy as member of the society. Ogungbemi (2004) cited by Ogundele (2012:98) observed that children learn best when they can actively explore an environment that is rich in materials. Adebanjo (1996) in Ogundele (2012:98) supports the view that children learn best, when the school environment is enriched with adequate teaching learning materials.

Recreational facilities are therefore those materials put in place during teaching learning process that could also be interact with by the staffs and students during their leisure hours in the school premises. The recreational facilities necessary for effective teaching processes include laboratory, Gymnasium, library, computer set, and Cyber café (Ogundele 2012:98). Ezeanichinedu (2009) cited in Ogundele (2012:98) defined recreational facilities as type of the instructional material and other infrastructural facilities such as building tools, equipment and other teaching–learning aids that are necessary for the students to learn at leisure hours. He described recreational facilities as materials that are necessary for the students teaching and learning process which aid students' effective academic performance. Ezeanichinedu, stated that every subject has her own recreational facilities for instance in mathematics, there are abacus, computer, calculations pyramid, Ayo, whots, ludo, shopping corner etc. In English Language there are Novels,

dramatization, reading corner etc. Also, in science subjects there are scientific equipment in the laboratory. Every type of facilities played with have significant impacts on the teaching learning processes in the schools and they have positive impacts on the student's academic performance (Ogundele (2012:98).

According to Gbadamosi (1991) cited in Ogundele (2012:98), recreational facilities as all forms of information carrier that are used to record preserve, transmit or retrieve information through recreational activities for the instructional processes in the schools. He described recreational facilities as an indispensable tool for effective teaching-learning processes the schools. Gbadamosi mentioned different types of recreational facilities that the schools can put in place for the school use as film strips, flat pictures, projected and non-projected films, photographic materials, maps, globes, charts and diagrams.

Provision of recreational facilities in the schools creates several avenues whereby individual students can develop intellectually according to their potentials and abilities. Adebanjo however was the opinion that adequate supply of recreational facilities reduce students unrest and vandalism, it also enhances smooth execution of education programme for effective students academic performance (Ogundele 2012:99). Ogundele however noted that if the students were taught during their leisure hours using the available recreational facilities in the environment, effective teaching learning process will take place among the students (Ogundele 2012:100). Suleiman (2001) cited in Ogundele 2012:101) also mentioned laboratory, library, indoor sport halls and gymnasium as good examples of recreational centers where effective teaching-learning process could be enhanced. To the author, laboratory can be defined as a place where various empirical scientific concepts and their relationships are being learnt through practice or

experimentation, without laboratory, experimental works could not be adequately learnt. The use of laboratory approach to teaching has also been extended beyond the science subjects, there is growing demand for languages laboratory in the schools. It is therefore important to note that recreational facilities are tools for the teaching learning processes in all subjects in the secondary schools. The availability of recreational facilities in the schools in the school system will not only help the teaching-learning process but improved the students' ability in the schools.

According to Iheanacho et al (2011), if facilities are available and adequate and well maintained, there is every possibility of having a good programme. He further stated that facilities and equipment are fundamental factors and a sensitive area in physical education programme. Oyeniyi (2002) cited by Iheanacho et al (2011) asserted that facilities and equipment are the power house of sport; hence they are indispensable to competitive and recreational sports. In the same vein Etim (1986) cited in Iheanacho et al (2011) noted that provision of good and well-equipped facilities are among other essential factors that are necessary for effective administration and management of sports.

Adesoye & Talabi (2004) revealed that as a result of academic and occupational demand in Nigerian higher institutions, average students and lecturers find it difficult to know what goes on in a gymnasium or relate positively to activities outside academic program. The study also observed that majority of academic staff in Nigerian higher institutions do not actively participate in leisure time activities due to some social factors such as age, gender, religion, skill level, geographical features. It is important therefore to go into this study to find impetus to existing lethargy towards recreation in secondary school. Omolawon and Sanusi (2006) worked only on provision of equipment and

availability of facilities as perceived to be determinants associated with non participation of university of Ibadan academic staff in physical activities. Morakinyo & Atare (2001) concentrated on indices of only outdoor recreation participation among Local Government workers. It was found that active participation in physical activities and recreation correlate positively to the overall quality of life. Unfortunately, academic staff did not maximally utilize the available equipment and facilities. This research work intends to build on these researches by considering other salient factors that influence recreational sports participation among secondary school in Zaria Education Zone.

Agbo and Agbo (2005) posited that, the more one engages in physical activities such as soccer, swimming, golf, etc the more efficient is the functioning of the body system. Therefore, Kabido (2003) suggested that it is an important factor in the life of any nation to train and maintain a good and strong effective workforce through avenue of recreational activities. As reviewed in the literature, in Nigeria, the Southern parts are very different from the Northern parts with regard to physical features and weather conditions. Whist some parts of the South have thick forests and many rivers, some parts of the North are semi-desert with very few rivers. These vary features determine the choice of recreational sports of the schools. The rationale for this study is to investigate the provision and maintenance of recreational facilities for effective teaching –learning processes.

2.2.8 Welfare Facilities in Secondary Schools

Researchers have done tremendous work on welfare and job satisfaction. Some studies have determined the influence of welfare facilities on job satisfaction. Other studies have researched the extent of job satisfaction experienced by employees and the job facets

that are responsible in promoting job satisfaction. The welfare measures provided in an organisation affect the attitudes of employees towards work. Welfare facilities satisfy the needs of the employees, which can improve their working life, family life and overall welfare. Various studies have explored the welfare facilities provided by organizations and determined its influence on job satisfaction. One such investigation was carried out by Goyal (1995) who studied the awareness of welfare facilities and brought out the relationship between welfare facilities and job satisfaction in her work titled Labour Welfare and Job Satisfaction. The study analyzed the impact of labour welfare measures on job satisfaction in the textile industries in Punjab, the extent of awareness and implementation of labour welfare measures among workers and the extent to which these measures have been successful to improve the workers' lot. Further the study critically assessed the problems and suggested ways to improve the implementation of welfare measures.

A visit to most schools, especially public school, would reveal serious concern about the school environment where students learn, some of which lack or characterized with inadequate toilet facilities.(Weidner 2009, Weiler et al. 2003, UN-Water decade programme 2007 cited in Agbo et al 2012:91). Provision of toilet facilities is considered a privilege rather than a necessity by most school authorities; which may affect school programmes failing in their roles to address health issues of the students but rather concentrating on the academic pursuits of these students. Inadequate or lack of toilet facilities has its health implications, some of these may be bacterial, viral and parasitic in origin such as typhoid and paratyphoid fever, dysenteries, diarrhoeas, cholera, hookworm, ascariasis, viral hepatitis, schistosomiasis, guinea worm diseases, genito-urinary tract

infections and a host of other intestinal and parasitic infections or even eye infections like trachoma (caused by Chlamydia trachomatis which is caused by flies that breed in dirty environment) which may lead to blindness, which can occur due to environmental pollution as a result of indiscriminate disposal of human excreta and inadequate sanitation. The burden of disease due to poor toilet facilities may incur huge financial loses to the individual, parents and the nation as a whole in terms of cost of ill-health investigations and treatment. This study aimed at assessing the quality of toilet facilities in secondary schools in Jos North LGA of Plateau State by determining the ownership, availability and the type of toilet facilities in the selected secondary schools (Agbo et al 2012: 91).

Provision and maintenance of welfare facilities in schools ought to be one of the prerequisite for granting approval for its commencement; however this is not usually enforced. Even in schools with such facilities, not all had separate toilet facilities for the different sexes as some even had no toilet facility at all (Sharma 2011 cited in Agbo et al 2012: 93). According to World Health Organization, schools provide not just toilets but toilets which should be in the ratio of 1:30 learners (WHO 2010), i.e. provide at least a toilet for every 30 learners; however none of the schools studied met this criterion. This may either be that abinitio, was not taken into consideration during the construction process or that these schools have suddenly been overwhelmed by the growing population of school attendees with no existing policy in place to cater for future expansion. An insufficient toilet/student ratio contributed to overuse, filthy conditions and a consequent return to open defecation around schools, or absenteeism in order to use a home toilet (Pillitteri 2012 cited in Agbo et al 2012: 93)

Conducive school environment promotes learning and imbibes good morals in the students. Education cannot be sought in isolation of a sound state of health, no wonder therefore that emphasize was laid on the attainment of Universal Basic Education which in turn may also serve as a synergy to reducing child mortality as declared in the Millennium Development Goals (MDGs) (Agbo et al 2012: 93).Teachers are the centre-piece of any education system. No education system can rise above the quality of its teachers. Teachers whose morale is low are not likely to perform as expected in the school system. According to Ajayi and Oguntoye (2003), the numerous problems permeating the entire education system in Nigeria such as cultism, examination malpractices, drug abuse, indiscipline, persistent poor academic performance of students in public examinations and many more seem to suggest that teachers have not been performing their job as expected. Fadipe (2003) posited that teachers, apart from students, are the largest most crucial inputs of an education system. They influence to a great extent the quality of the education output. Teachers' irregular promotion, low pay package (when compared to other public workers), societal perception of the job and many more have dampened the morale of teachers. When teachers are not motivated, their level of job commitment may be low and the objectives of the school may not be accomplished.

2.3 Empirical Studies

In the views of Grasmick, Scott, Rutherford, Meloney, Puddester and Lever, (2005) cited by Odigwe and Eluwa (2013:102), for schools as well as for all types of facilities; corrective maintenance is necessary in order to address observed deficiencies and preventive maintenance so as to protect against new deficiencies in order to greatly extend the useful life of the structure. By maintaining building structures, the costs of future

repairs and major renovation are significantly reduced. Regular maintenance ensures that buildings will remain operational even under adverse weather condition. Most important, a well maintained school facility protects the health and safety of building occupants, as well as the equipments therein. There is a positive relationship between the quality of a school facility and the quality of the education activity that takes place within as evident from the study of Craig, (2009) cited by Odigwe and Eluwa (2013:102).

The global challenge to the future of most developing and underdeveloped nations of the world is the provision of qualitative and sustained education to her citizenry. Sustained qualitative education is fundamental to the much needed technological development; a major ingredient to the advancements of the third world nations. Steady decline in the education performance of students in secondary schools in African nations is evident from cross sectional studies, and this steady decline has being traced to the growing concern about adequate provision, maintenance, and management of school facilities (Godfrey & Chuks, 2010) cited by Odigwe and Eluwa (2013:103). A number of school systems, particularly those in urban and high-poverty areas, are plagued by decaying buildings which threaten the health, safety, and learning opportunities of students. Good learning facilities are an important precondition for students learning; provided other conditions are met which support a strong academic programme in the school.

A growing body of research has linked student achievement and behavior to the physical building conditions and resultant overcrowding. More so, with the enormous public concern that is placed on high academic achievement, the condition of school facilities is considered a significant factor that does influence learning. As such, regular

funding initiative should be developed in order to provide incentive for regular and sustained maintenance of the local school systems. In the articles by Vaughan (2008) and Vandiver (2011) cited by Odigwe and Eluwa (2013:103) , it was emphasized that more than other building types, school facilities whose primary functions is teaching and learning, have a profound impact on their occupants. They believe that the design and layout of school facilities should poses features that will aid learning and teaching. They stress that the design and layout of the learning environment should be taken into consideration in various stages of development. In a research submission by Odofowokam (2011) and Olaleye (2012) cited by Odigwe and Eluwa (2013:103), it was noted that over the last two decades, the management of primary and secondary education had been experiencing some problems as a result of policy gaps in Nigeria. Schools were not well-maintained and facilities were not adequately provided arising from the fact that management of primary and secondary education were used as political football between State Government, Local Government and Federal Government. In a similar research study by Ijaiya (2001) as cited by Odigwe and Eluwa (2013:103), it was opined based on the unstable situation that the worth of any management is established on its ability to produce quality artifacts and satisfy clients and other stakeholders. The tasks of such entity, therefore, include identifying and solving any problem that militates against quality delivery. It is believed that such a problem solving approach should be directed at taking preventive measures against wastage.

In a study by Nkemakolam (1988) on the Nigeria graduating system. It reveals the significant factors associated with the falling standard of education; and that when they occur in any nation, the education system is said to be unstable as is the case with Nigeria.

(a) Vehicles, stationary, textbooks.

(b) High pupils/students ration.

(c) Personnel management problems.

(d) Lack of reliable statistics about teaching staff strength.

(e) Poor funding by the government.

(f) Administrative problems.

(g) Corruption.

Adesina (1981:87) observes that one potent index for evaluating education standards and quality is an examination of the physical facilities of learning exercises. Anderson (1975) considers instructional materials as an integral part of the education process and as vehicles used by teachers' along with instructional techniques to convey the contents of instruction to the students. Ezaocha (1985) asserts that at all levels, here is failure in education innovations due to inadequate planning and management. UNESCO (1984) asserts that maintenance involves maintaining items, building, furniture and equipment as far as possible in their original condition.

In line with few point highlighted above, the researcher has decided to find out and confirm these points.

Provision and maintenance of physical facilities are the primary responsibility of the Government and the school leadership. Principals must be fully concerned with the physical environment and other facilities around the school. Dilapidated buildings, leaking roofs, abandoned projects, over-grown trees and lawns, dingy and dark buildings, etc have demoralising effects of people, especially the adolescents (Obidoa, 2006 cited by Ekundayo 2010:190). As a result, the principals have the responsibilities of ensuring that

these facilities are in good shape. Even with the meager resources at their disposal, they have the responsibility of providing teachers and other instructional staff with necessary resources for effective teaching (Babayemi, 2006 cited by Ekundayo 2010:190).

2.4 Summary

The review of related literature was based on the conceptual framework of the study. The concepts; provision, maintenance, school plant facilities, teaching facilities, learning facilities, games and recreational facilities and welfare facilities were defined. From the analysis made, it was deduced that the national goal of education emphasizes maintaining existing facilities in the school. Also adequate provision of school plant facilities promotes development of education system that provide satisfactory flow of men and women capable of acquiring the skills necessary to exploit to the fullest, the natural resources of the country. It was also deduced that buildings, infrastructure, equipment, teaching and learning aids are needed in the secondary school to make teaching and learning process effective and efficient. The importance of these items are shelter to staff and students, laboratory facilities to generate manipulative skills in students, sports/games facilities to developed mental ability, social and physical aspects of the students, etc. However, all these can be achieved if only they are well managed and maintained.

Ogbodo (1995:44), states that school facilities create substantial cost to the school system for their establishment, if not properly managed and maintained. They dilapidate and wear out faster than their "life span" and also if not properly utilized, the school system will not derive maximum benefit from their use. Ideally, safety takes priority over cleanliness, orderliness, cost effectiveness and even instructional support.

According to Ajayi (2001) and Ijaduola (2008) clipped in that school plant need to be adequately managed in order to ensure both effectiveness and efficiency of the system. Above all, the common goal of operation and maintenance as remarked by Ojedele (2008) is to keep physical plants in the best possible condition at all time. The importance of school plant management therefore includes safety for those occupying the school building, it facilitates effective teaching and learning process, it saves cost because reactivating a collapsed building may cost more that to make early repairs on the building, it ensures the suitability of school plant for continued use because repairs and replacement of various equipments make such to be in good shape, it reduces students unrest and demonstration because students can protest or demonstrate when school plants are not well maintained e.g. toilet facilities, poor electricity etc.

Okebokola (2002) and Ajayi (2007) stated that effective teaching-learning process cannot be guaranteed with inadequate education materials. The worst hit is the rate of discrimination between urban schools and their rural counterparts, same with public schools away from private ones. Ogbodo (1999) speaking in this direction claimed that with regards to every social amenities urban areas are far better that the rural area, this disparity especially apparent in the area of education facilities. The situation transcends beyond the developing countries but feasibly noticed in this part of the world.

It is not surprising, therefore, to find that the schools in urban areas are better constructed, maintained and furnished, especially the private ones. Far from this, many public schools in the urban areas are in terrible state of disrepair and lacking even in basic facilities. The main reasons for this act may be due to high concentrations of population which often seem politically more articulated than their rural counterparts. Equally

important to note is that, the children of senior government officials are likely to be more ultimately acquainted with the physical state of these schools that the rural schools (Mgbodile, 1986).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives a detail roadmap of how the research was conducted. It explained the research design, population, sample and sampling techniques, research instrument, validity and reliability of the instrument. Others were pilot study, procedure for data collection and procedure for data analysis respectively.

3.2 Research Design

The research design adopted for this study was descriptive survey type. This was premised on the data collected from a representative sample upon which inferences and generalizations were made on the entire population. As a result, the researcher surveyed the opinions of the principals, teachers, and staff of ministry of education across the sampled schools in Zaria Education Zone, Kaduna State on the assessment of provision and maintenance of school plants. Thus, it is believed that the research instrument(s) would facilitate the intention to achieve set out goals.

3.3 Population of the Study

The population for this study is drawn from school heads (Principals), teachers and Officials of Ministry of Education in Zaria Education Zone in Kaduna State. The percentage therefore is 12%. Table 1 shows the population distribution of the study.

Table 1: Population of the study

The table below shows the population distribution of the study. This includes the names and total number of the secondary schools, number of Principals and number of teachers in the zone under review**.**

SN	Names of Schools	No. of Principal	No. of Teachers	Total
1.	Barewa College, Zaria	1	68	**69**
2.	Govt. Secondary School, Tudun Jukun	1	47	**48**
3.	Govt. Secondary School, K/Bana	1	49	**50**
4.	Alhudahuda College, Zaria	1	80	**81**
5.	Sheikh Ibrahim Arab Special Sec. Sch., K/Karan	1	59	**60**
6.	Govt. Secondary School, Dinya	1	10	**11**
7.	Govt. Secondary School, Dakachi	1	28	**29**
8.	Govt. Secondary School, Kugu	1	11	**12**
9.	Govt. Secondary School, Yakassai	1	10	**11**
10.	Govt. Secondary School, Kufena	1	28	**29**
11.	Govt. Commercial College, S/Gari	1	84	**85**
12.	Govt. Girls Secondary School, Zaria	1	65	**66**
13.	Govt. Secondary School, Likoro	1	8	**9**
14.	Govt. Girls Secondary School, K/Gayan	1	6	**7**
15.	Govt. Secondary School, Gyellesu	1	24	**25**
16.	Govt. Secondary School, Awai	1	8	**9**
17.	Govt. Secondary School, Zaria	1	55	**56**
18.	Govt. Secondary School, Munchia	1	20	**21**
19.	Govt. Secondary School, T/Saidu	1	17	**18**
20.	Govt. Sec. Sch., Chindit Barracks	1	31	**32**
21.	Govt. Secondary School, Magajiya	1	20	**21**
22.	Govt. Secondary School, Aminu	1	37	**38**
23.	Govt. Secondary School, Kaura	1	27	**28**
24.	Govt. Secondary School, Pada	1	39	**40**
25.	Govt. Girls Secondary School, D/Bauchi	1	47	**48**
26.	Govt. Girls Sec. Sch., Chindit Barracks	1	27	**28**
27.	Govt. Junior Secondary School, T/Wada	1	47	**48**
28.	Govt. Junior Secondary School, Bogari	1	13	**14**
29.	Govt. Junior Secondary School, Rimi Doko	1	22	**23**
30.	Govt. Junior Secondary School, Manji	1	22	**23**
31.	Govt. Junior Secondary School, Kofar Jatan	1	32	**33**
32.	Govt. Junior Sec. Sch., Rimi Kofar Doka	1	39	**40**
33.	Govt. Junior Secondary School, Aba	1	8	**9**
34.	Govt. Junior Secondary School, Kinkiba	1	8	**9**
35.	Govt. Junior Secondary School, Richifa	1	9	**10**
36.	Govt. Junior Secondary School, Matari	1	7	**8**
37.	Govt. Junior Secondary School, Chikaji	1	29	**30**
38.	Govt. Junior Secondary School, Gimbo	1	13	**14**
39.	Govt. Junior Secondary School, Zaria	1	28	**29**
40.	Govt. Junior Secondary School, Muchia	1	28	**29**
41.	Govt. Junior Secondary School, T/Saidu	1	33	**34**
42.	Govt. Junior Sec. Sch., Chindit Barracks	1	27	**28**
43.	Govt. Junior Secondary School, Magajiya	1	20	**21**
44.	Govt. Girls Junior Secondary School, Pada	1	32	**33**
45.	Govt. Girls Junior Sec. Sch., Chindit Barracks	1	33	**34**
46.	Govt. Girls Junior Sec. Sch., D/Bauchi	1	37	**38**
		46	1,436	**1,482**

Source: *Zaria Zonal Education Board (2014)*

Table 2: Summary of Number of Schools in Each Zone

Zaria Zone Number of Local Governments, Principals, Teachers and Officials of MoE				
LGA	**No. of Principals**	**No. of Teachers**	**No. of Officials of Min of Education**	**Remarks**
Sabon Gari	12	405	9	
Soba	10	145	6	
Kudan	1	13	4	
Zaria	23	873	17	
Total	**46**	**1436**	**35**	

Source*: Zaria Zonal Education Board (2014)*

3.4 Sample and Sampling Technique

A sample is a small group of element drawn through a definite procedure from a specified population (Yabo, 2007). The sample size for the study was determined by taking 25% percentage out of the entire population. This according to Nwana (1997) suggests that 25% percentage of a population of this magnitude can be used as the sample size. To this end, the total of 12 principals, 359 teachers and 9 Zonal Education Board Staff will be used for the study. In selecting the sample size, simple random technique will be used (see Table 3).

Table 3: Sample Size Distribution

Zone	No. of Principals	No. of Teachers	No. of Officials of Min of Education
Sabon Gari	4	120	3
Soba	3	33	2
Kudan	1	20	1
Zaria	4	186	3
Total	12	359	9
Sum total			380

3.5 Instrumentation

One of the research instrument used was the questionnaire. It was used to collect data from respondents. The selected instruments were self-developed by the researcher purposely to elicit respondents' opinion on certain issues.

Questionnaire: It is a form of research instrument which presented a set of question items to elicit the responses of a particular subject uncertain in a research work. In this case, questionnaire was selected singularly because it is relatively effective to administer and score; and when carefully designed it gives an objective and reliable information. This researcher made questionnaire was captioned" Questionnaire on the assessment of provision and maintenance of school plant in secondary schools in Zaria Education Zone, which were sub-divided into five parts ie sections A - E. Section A seeks to elicit information of the respondents' on personal data while section B to E sought the opinion of respondents' on the following variables**.** It was scored using Likert five (5) point linkert scale of Strongly Agree (SA), Agree (A), Undecided (U), Strongly Disagree (SD) and Disagree (D). The responses on strongly agree and agree will be merged to be agree while

strongly disagree and disagree will also be merged to be disagree. The responses coded as strongly agree (5), agree (4), undecided (3), strongly disagree (2) and disagree (1).

3.5.1 Validity of the Instrument

The instrument was validated by the supervisors and two other experts in the field of Education Administration and Planning Ahmadu Bello University, Zaria. This is to ascertain that the face and content validity of the instrument correspond with the objectives and hypotheses of the study.

The validity of this work can further be substantiated in the works of Bodunde (2004) that validation of instruments by experts is an effective method of content validity of research instrument. The study had considered the corrections made by the experts and appropriate modifications made. Comments made by experts were satisfactory with regards to the instruments. Corrections were effected and items reconstructed.

3.5.2 Pilot Testing

Connelly (2008) as cited by Tapping (2014) suggests that a pilot study sample should be 10% percent of the main sample projected for the larger parent study, he also maintained that 10% should be a minimum. Consequently, a pilot study was carried out in Government Secondary School Basawa, Government Day Secondary School Samaru, Government Girl Secondary School Bomo and Government Secondary School Shika. It involved the administration of Thirty Eight (38) copies of questionnaire on the respondents which were all teachers. At the completion of the exercise which took place within two (2) days, Thirty Eight (38) copies of questionnaire were returned fully filled. This is because the researcher wanted to use respondents' that would not be involved in the actual research study so that they would not be conversant with the questionnaire beforehand. The purpose

of the pilot study was to determine the reliability of the instruments. It was personally undertaken by the researcher and inputs obtained guided the final draft of the questionnaire, for the start of field operations.

3.5.3 Reliability of the Instrument

The study used Cronbach Alfa Technique to calculate the pilot study result and the reliability index of 0.729 was realized for use in the conduct of the main study because in Cronbach Alfa reliability analysis, the closer the Cronbach Alfa to 0.1 the higher the interval consistency reliability. This is in line with Mukherjee (2000) who stated that the requirement interval consistency was an average value of the correlation co-efficient which must be higher than 0.05.

3.6 Administration of Research Instrument

The researcher obtained a letter of introduction from the Department of Educational Foundation and Curriculum to the respective schools. This was to facilitate the research work bearing in mind, the need to get the approval of the school headship and the cordial attention of staff. The study carried out involving the administration of Three Hundred and Eight (380) copies of questionnaire on the respondents. The use of research assistance quickens the distributions and collection of filled questionnaire. The researcher before this time trained the research assistants on the modality of carrying out the exercise.

3.7 Procedure for Data Analysis

Two statistical procedures were employed in the data analysis task. One, the descriptive statistics was employed to find the mean of the responses of the respondents, using One-Way-Analysis of Variance (ANOVA) in the analysis of the eight formulated null-hypotheses. ANOVA was considered as the most suitable statistical tool because of

the involvement of two or more variables in the study. However, the use of computer aided software in the form of Statistical Package for Social Sciences (SPSS) was used at 0.05 level of significance.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter contains the data presentation, data analysis, interpretation and discussion of the results. The data for the study were analyzed using both the descriptive and inferential statistics. The data were generated from the questionnaires administered to the respondents. The chapter ends with a summary of the findings.

4.2 Bio-data of the Respondents

The following table shows the frequency and percentages of the data collected from the questionnaire administered on the principal, teachers and officials of Ministry of Education (MOE).

Table 4 below shows details of the Status of the Respondents

Table 4: Status of the Respondents

Respondents	Frequency	Percentage
Principal	12	3.2
Teacher	359	94.5
Officials of MOE	9	2.4
Total	**380**	**100**

From table 4 it can be seen that 12 or 3.2% of the respondents are principal while the majority 359 or 94.5% are teachers and the remaining 9 or 2.4% are officials of Ministry of Education.

Table 5 shows details of the Gender of the Respondent.

Table 5: Gender of the Respondents

Gender	Frequency	Percentage
Male	149	39.2
Female	201	52.9
Total	**380**	**100**

The descriptive analysis on table 5 revealed that 149 (39.2%) males responded to the questionnaire instrument, while the total of 201 (52.9%) females participated in the study. This shows that the female respondents were more represented in the study.

Table 6 below shows details of the Educational qualification of the Respondents.

Table 6: Educational Qualification

Variable	Frequency	Percentage
Masters Degree	126	33.2
Bachelors Degree	154	40.5
NCE	73	19.2
Others Specify	7	1.8
Total	**380**	**100**

Table 6 shows that 126 (33.2%) of the respondents are holders of masters degree, while 154 (40.5%) are Bachelors degree holders. Also, 73 (19.2%) possessed the NCE certificate and 7 (1.8%) are holders of other qualifications.

Table 7 below shows the details of the age of the respondents.

Table 7: Age of the Respondents

Age Range	Frequency	Percentage
25-30 yrs	91	23.9
31-40 yrs	208	54.7
41-50 yrs	52	13.7
51-60yrs	26	6.8
Total	**380**	**100**

Table 7 shows that 91 (23.9%) of the respondents are between the age range of 25-30 years, while 208 (54.7%) are between 31-40 years. Likewise, 52 (13.7%) are of the age range of 41-50 years and 26 (6.8%) are 51-60 years of age.

Table 8: Years of Experience as Principal

	Frequency	Percentage
1-5 yrs	62	16.3
6-10 yrs	62	16.3
11-15 yrs	137	36.1
16 and above yrs	15	3.9
Total	**380**	**100**

From table 8 it was revealed that 62 (16.3%) of the principal have the experience of 1-5 years and 6-10 years respectively, while 137 (36.1%) are between 11-15 years of experience as principal. Likewise, 15 (3.9%) have worked for 16 and above years as principal.

Table 9: Location of School

Location	Frequency	Percentage
Urban	183	48.2
Rural	189	49.7
Total	**380**	**100**

Table 9 shows that 183 or 48.2% of the respondents are from urban schools and 189 or 49.7% are from rural schools.

4.3 Answer to Research Questions

This section revealed the analysis of the opinions of respondents in respect to the research questions.

Research Question 1: What are the available teaching facilities in secondary schools in Zaria Education Zone, Kaduna State?

Table 10 revealed the opinions of officials of ministry of education, principals and teachers on the provision of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 10: Opinions of Officials of MOE, Principals and Teachers on the Provision of Teaching Facilities in Secondary Schools in Zaria Education Zone, Kaduna State.

SN	Item Statement	Respondents	Response Categories						Std. dev.
			SA	A	U	SD	D	Mean	
1.	Classroom are adequately provided	M.O.E.	5	1	2	-	1	3.11	1.167
		Principals	1	4	2	1	4	3.40	1.206
		Teachers	146	45	58	33	77	3.82	1.460
2.	Chalk board are adequately provided	M.O.E.	5	1	2	-	1	3.00	1.323
		Principals	4	-	3	-	5	3.25	1.375
		Teachers	57	36	105	54	107	3.82	1.268
3.	Laboratories are adequately Provided	M.O.E.	7	-	2	-	-	4.56	882
		Principals	3	6	2	-	1	3.92	900
		Teachers	129	69	57	16	88	3.54	1.377
4.	Chairs are adequately provided	M.O.E.	1	3	1	3	1	3.00	1.323
		Principals	4	4	3	1	-	3.50	1.624
		Teachers	38	42	91	53	135	2.64	1.204
5.	Tables are adequately provided	M.O.E.	3	-	2	1	3	3.11	1.537
		Principals	7	1	2	-	2	4.08	1.240
		Teachers	147	53	71	75	83	3.36	1.420
6.	Public address systems are adequately provided	M.O.E.	2	2	-	3	2	3.78	1.716
		Principals	8	-	-	3	1	3.08	1.379
		Teachers	47	63	70	41	138	2.82	1.230
7.	Flip charts are adequately provided	M.O.E.	2	-	3	1	3	3.89	1.364
		Principals	3	-	3	2	4	3.82	1.467
		Teachers	133	45	61	29	91	3.45	1.409
8.	Models are adequately provided	M.O.E.	3	-	-	3	3	3.67	1.803
		Principals	1	3	6	-	2	3.25	866
		Teachers	53	89	66	43	108	2.98	1.308
9.	Specimen are adequately provided	M.O.E.	1	1	2	4	1	2.67	1.225
		Principals	3	5	1	1	2	3.33	1.670
		Teachers	97	73	56	53	80	3.22	1.441
10.	Workshops are adequately provided	M.O.E.	3	-	2	3	1	2.89	1.764
		Principals	1	2	5	2	2	2.75	1.357
		Teachers	41	41	160	79	38	2.80	1.233

In table 10, items 1-10 reveal the opinion of stakeholders on the provision of teaching facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that Classrooms are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and teachers is 3.82. From item 2, the responses of the respondents were all accepted that science laboratory is

provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that laboratories are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, provisions of chairs in the schools. Item 5 were also all agree that tables are provided in school. In item 6, there is general accepted from the respondents that public address system are provided. Item 7 also show that flip chart is adequately provided with the mean score of 3.89 for MOE, 3.82 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that models and specimen are provided in the schools. Item 10 shows that workshops are not provided for the students in the school with decision mean of 2.89 representing MOE, 2.75 for principal and 2.80 for teachers.

Research Question 2: Are the teaching facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

Table 11 revealed the opinions of officials of ministry of education, principals and teachers on the maintenance of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 11: Opinions of Officials of MOE, Principals and Teachers on the Maintenance of Teaching Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	SD	D		
1.	Classroom are well maintained	M.O.E.	5	1	2	-	1	3.25	1.167
		Principals	1	4	2	1	4	3.82	1.206
		Teachers	146	45	58	33	77	4.56	1.460
2.	Chalk board are well maintained	M.O.E.	5	1	2	-	1	3.92	1.323
		Principals	4	-	3	-	5	3.54	1.375
		Teachers	57	36	105	54	107	3.00	1.268
3.	Laboratories provided are adequately maintained	M.O.E.	7	-	2	-	-	3.50	882
		Principals	3	6	2	-	1	2.64	900
		Teachers	129	69	57	16	88	3.11	1.377
4.	Chairs are well maintained	M.O.E.	1	3	1	3	1	4.08	1.323
		Principals	4	4	3	1	-	3.36	1.624
		Teachers	38	42	91	53	135	2.78	1.204
5.	Tables are well maintained	M.O.E.	3	-	2	1	3	3.08	1.537
		Principals	7	1	2	-	2	2.82	1.240
		Teachers	147	53	71	75	83	2.89	1.420
6.	Public address systems are well Maintained	M.O.E.	2	2	-	3	2	2.82	1.716
		Principals	8	-	-	3	1	3.45	1.379
		Teachers	47	63	70	41	138	2.67	1.230
7.	Flip charts provided are adequately maintained	M.O.E.	2	-	3	1	3	3.25	1.364
		Principals	3	-	3	2	4	3.98	1.467
		Teachers	133	45	61	29	91	3.67	1.409
8.	Models provided are adequately Maintained	M.O.E.	3	-	-	3	3	3.33	1.803
		Principals	1	3	6	-	2	3.22	866
		Teachers	53	89	66	43	108	2.89	1.308
9.	Specimen are well maintained	M.O.E.	1	1	2	4	1	2.75	1.225
		Principals	3	5	1	1	2	2.80	1.670
		Teachers	97	73	56	53	80	3.25	1.441
10.	Workshops are well maintained	M.O.E.	3	-	2	3	1	2.82	1.764
		Principals	1	2	5	2	2	2.56	1.357
		Teachers	41	41	160	79	38	1.92	1.233

In table 11, items 1-10 reveal the opinion of stakeholders on the maintenance of teaching facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that Classrooms are well maintained in the school, this could be seen from the responses of the respondents where the mean of MOE is 3.23, Principal is 3.82 and teachers is 4.45. From item 2, the responses of the respondents were all accepted that science chalkboard provided are well maintained with the mean score representing the

MOE 3.92, principal 3.54 and teacher is 3.00. In respect to item 3, it was also accepted from the responses of the respondents that laboratories are well maintained where the mean score representing the MOE 3.00, principal 3.50 and 2.64 for teachers. In item 4, shows that chairs are well maintained in the schools. Item 5 were also all agree that tables are well maintained in school. In item 6, there is general accepted from the respondents that public address system provided are maintained. Item 7 also show that flip chart provided are maintained in the school with the mean score of 3.25 for MOE, 3.98 for principal and 3.82 for teachers. From item 8 and 9, the respondents were all accept that models and specimen are well maintained in the schools. Item 10 shows that workshops are not maintained in the students in the school with decision mean of 2.82 representing MOE, 2.56 for principal and 1.92 for teachers.

Research Question 3: What are the available learning facilities in secondary schools in Zaria Education Zone, Kaduna State?

Table 12 revealed the opinions of officials of ministry of education, principals and teachers on the provision of learning facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 12: Opinions of Officials of MOE, Principals and Teachers on the Provision of Learning Facilities in Secondary Schools in Zaria Education Zone, Kaduna State.

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	D	SD		
1.	Computers are adequately provided	M.O.E.	5	-	2	1	1	3.78	1.563
		Principals	2	-	5	1	4	2.83	1.193
		Teachers	66	56	143	38	56	3.16	1.204
2.	Libraries are adequately provided	M.O.E.	2	1	3	-	3	3.22	1.202
		Principals	3	-	6	-	3	3.25	1.138
		Teachers	44	49	176	21	69	3.07	1.025
3.	Internet/ICT are adequately	M.O.E.	3	-	3	2	1	3.11	1.616
	Provided	Principals	1	-	5	-	6	2.50	1.168
		Teachers	76	45	164	17	57	3.28	1.135
4.	Microscopes are adequately	M.O.E.	2	5	-	-	2	4.22	1.093
	Provided	Principals	1	2	6	1	2	3.83	1.337
		Teachers	15	67	21	21	98	3.95	1.078
			2						
5.	Projectors are adequately provided	M.O.E.	2	1	4	1	1	3.22	1.302
		Principals	2	3	-	6	1	3.50	905
		Teachers	38	41	150	26	59	3.25	1.225
6.	Video CD Players are adequately	M.O.E.	2	1	5	-	1	3.44	1.014
	Provided	Principals	1	2	4	-	5	2.92	996
		Teachers	39	37	139	42	102	2.80	1.120
7.	Audio CD Players are adequately	M.O.E.	4	-	3	-	2	2.67	1.323
	Provided	Principals	1	-	4	2	5	2.08	1.443
		Teachers	69	46	150	18	76	3.20	1.128
8.	Textbooks are adequately provided	M.O.E.	3	1	2	-	3	3.44	1.333
		Principals	3	1	5	-	3	3.00	.8706
		Teachers	42	26	154	30	107	2.84	1.073
9.	Stationeries are adequately provided	M.O.E.	3	-	5	-	1	3.56	.5630
		Principals	2	-	5	2	3	2.75	1.288
		Teachers	73	39	152	25	70	3.17	1.190
10.	Exercise books are adequately	M.O.E.	2	2	1	-	4	3.22	.302
	Provided	Principals	2	2	2	3	3	3.75	1.485
		Teachers	46	37	77	39	160	3.69	1.202

In table12, items 1-10 reveal the opinion of stakeholders on the provision of learning facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that computers are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and teachers is 3.82. From

item 2, the responses of the respondents were all accepted that science libraries is provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that internet ICT are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, provisions of chairs in the schools. Item 5 were also all disagreed that microscope are provided in school. In item 6, there is general disagreed from the respondents that video CD are provided. Item 7 also show that audio CD is not provided with the mean score of 2.67 for MOE, 2.08 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that textbooks and stationeries are provided in the schools. Item 10 shows that exercise books are provided for the students in the school with decision mean of 3.22 representing MOE, 3.75 for principal and 3.69 for teachers.

Research Question 4: Are the learning facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

Table 13 revealed the opinions of officials of ministry of education, principals and teachers on the maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 13: Opinions of Officials of MOE, Principals and Teachers on the Maintenance of Learning Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	SD	D		
1.	Computers are well maintained	M.O.E.	3	1	1	-	4	3.33	.7414
		Principals	1	4	2	3	2	2.83	1.403
		Teachers	54	36	82	40	147	2.73	1.282
2.	Libraries are well maintained	M.O.E.	5	2	1	-	1	4.22	.993
		Principals	2	1	-	-	9	2.67	1.412
		Teachers	102	59	44	36	118	3.20	.6412
3.	Internet/ICT are well maintained	M.O.E.	1	-	2	1	5	2.44	1.130
		Principals	2	2	2	3	3	2.58	1.676
		Teachers	60	35	73	39	152	2.79	1.259
4.	Microscopes are well maintained	M.O.E.	4	1	-	-	4	3.50	1.509
		Principals	1	2	-	1	8	2.50	1.168
		Teachers	98	55	64	46	96	3.16	1.431
5.	Projectors are well maintained	M.O.E.	3	1	3	1	1	3.44	1.424
		Principals	6	1	-	1	4	3.58	1.621
		Teachers	72	68	84	20	115	3.15	1.250
6.	Video CD Players are well Maintained	M.O.E.	3	2	-	2	2	3.22	1.716
		Principals	2	4	1	-	5	3.25	2.215
		Teachers	74	73	51	42	119	3.03	1.386
7.	Audio CD Players are well Maintained	M.O.E.	3	1	3	1	1	2.44	1.424
		Principals	1	3	3	-	5	2.00	1.044
		Teachers	83	63	76	41	96	2.14	1.345
8.	Textbooks are well maintained	M.O.E.	4	-	-	2	3	3.11	1.833
		Principals	4	3	1	-	4	3.25	1.865
		Teachers	97	61	59	58	84	3.15	1.454
9.	Stationeries are well maintained	M.O.E.	3	-	-	5	1	2.44	1.424
		Principals	4	2	1	1	4	3.33	1.497
		Teachers	100	59	51	77	72	3.09	1.528
10.	Exercise books are well maintained	M.O.E.	3	1	1	-	4	3.33	1.414
		Principals	1	4	2	3	2	2.83	1.403
		Teachers	54	36	82	40	147	2.73	1.282

In table 13, items 1-10 reveal the opinion of stakeholders on the maintenance of learning facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that Computers are well maintained in the school, this could be seen from the responses of the respondents where the mean of MOE is 3.33, Principal is 2.82 and teachers is 2.45. From item 2, the responses of the respondents were all accepted that

science libraries provided are well maintained with the mean score representing the MOE 3.92, principal 3.54 and teacher is 3.00. In respect to item 3, it was also accepted from the responses of the respondents that internet ICT are maintained where the mean score representing the MOE 3.00, principal 3.50 and 2.64 for teachers. In item 4, shows that microscope are not maintained in the schools. Item 5 were also all agree that projector is well maintained in school. In item 6, there is general accepted from the respondents that Video CD are not maintained. Item 7 also show that audio CD are not maintained in the school with the mean score of 2.44 for MOE, 2.00 for principal and 2.14 for teachers. From item 8 and 9, the respondents were all accept that textbook and stationeries are not maintained in the schools. Item 10 shows that exercise are not maintained in the students in the school with decision mean of 3.83 representing MOE, 2.33 for principal and 2.73 for teachers.

Research Question 5: What are the available of Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State?

Table 14 shows the opinions of respondents on the provision of Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 14: Opinions of Officials of MOE, Principals and Teachers on the Provision of Games and Recreational Facilities in Secondary Schools in Zaria Education Zone, Kaduna State.

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	D	SD		
1.	Athletic track are adequately	M.O.E.	5	-	1	3	-	3.44	1.944
	Provided	Principals	3	2	1	1	5	3.08	1.443
		Teachers	88	35	75	52	109	2.98	1.426
2.	Stadia are adequately provided	M.O.E.	4	2	3	-	-	4.11	928
		Principals	2	2	3	2	3	2.92	1.379
		Teachers	91	25	94	25	124	3.07	1.340
3.	Soccer pitches are adequately	M.O.E.	5	1	-	2	1	3.67	1.803
	Provided	Principals	3	2	3	1	3	3.25	1.357
		Teachers	110	52	73	36	88	3.31	1.387
4.	Basketball court are adequately	M.O.E.	5	-	2	-	2	4.89	1.364
	Provided	Principals	6	3	1	1	1	4.00	1.348
		Teachers	104	45	79	39	92	3.22	1.406
5.	Lawn Tennis courts are adequately	M.O.E.	3	-	2	1	3	3.11	1.537
	Provided	Principals	7	1	2	-	2	4.08	1.240
		Teachers	147	53	71	75	83	3.36	1.420
6.	Gymnasia are adequately provided	M.O.E.	2	1	2	-	4	3.11	1.269
		Principals	4	1	3	1	3	3.33	1.435
		Teachers	89	64	107	28	71	3.32	1.258
7.	Badminton courts are adequately	M.O.E.	4	1	1	1	2	3.56	1.590
	Provided	Principals	2	-	5	1	4	2.83	1.193
		Teachers	96	35	80	46	102	3.04	1.473
8.	Volleyball court are adequately	M.O.E.	4	1	1	-	3	3.67	1.414
	Provided	Principals	2	1	3	1	5	2.50	1.679
		Teachers	79	48	82	43	107	3.04	3.340
9.	Swimming pool are adequately	M.O.E.	5	1	-	1	2	3.78	1.641
	Provided	Principals	4	3	3	1	1	3.67	1.303
		Teachers	92	52	80	25	110	3.21	1.310
10.	Handball courts are adequately	M.O.E.	5	2	-	-	2	4.11	1.269
	Provided	Principals	3	3	1	2	3	3.17	1.528
		Teachers	95	65	77	41	81	3.25	1.383

In table 14, items 1-10 reveal the opinion of stakeholders on the provision of games and recreational facilities in secondary schools in Zaria Education zone in Kaduna State. Item 1 shows that athlete tract are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and

teachers is 3.82. From item 2, the responses of the respondents were all accepted that stadia is provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that soccer pitch are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, there were provisions of basketball in the schools. Item 5 were also all agree that lawn tennis court is provided in school. In item 6, there is general accepted from the respondents that gymnasia are provided. Item 7 also show that swimming pool is adequately provided with the mean score of 3.89 for MOE, 3.82 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that badminton and volleyball are provided in the schools. Item 10 show that handballs are adequately provided for the students in the school with decision mean of 4.11 representing MOE, 3.17 for principal and 3.25 for teachers.

Research Question 6: Are the Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

Table 15 shows the opinions of respondents on the maintenance of Games and Recreational facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 15: Opinions of Officials of MOE, Principals and Teachers on the Maintenance of Games and Recreational Facilities in Secondary Schools in Zaria Education Zone, Kaduna State.

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	D	SD		
1.	Athletic track are well maintained	M.O.E.	1	3	3	-	2	3.33	1.000
		Principals	1	4	3	3	1	2.92	1.379
		Teachers	83	39	106	48	83	3.06	1.358
2.	Stadia are well maintained	M.O.E.	1	-	4	-	4	2.78	972
		Principals	5	5	1	-	1	4.17	937
		Teachers	98	44	84	29	104	3.22	1.336
3.	Soccer pitches are well maintained	M.O.E.	1		4	1	3	2.67	1.118
		Principals	4	2	1	1	4	3.33	1.497
		Teachers	75	55	97	21	111	3.14	1.231
4.	Basketball court are well maintained	M.O.E.	1	2	3	1	2	3.00	1.225
		Principals	3	4	-	1	4	3.33	1.435
		Teachers	72	51	93	37	106	3.04	1.286
5.	Lawn Tennis courts are well	M.O.E.	2	3	3	1	-	3.56	1.236
	Maintained	Principals	1	5	3	1	2	3.25	1.138
		Teachers	73	44	97	33	112	2.98	1.349
6.	Gymnasia are well maintained	M.O.E.	3	1	2	-	3	3.44	1.333
		Principals	2	2	8	-	-	3.50	798
		Teachers	91	47	97	24	100	3.23	1.282
7.	Badminton courts are well maintained	M.O.E.	2	-	3	2	2	2.78	1.481
		Principals	2	3	3	2	2	3.08	1.379
		Teachers	63	43	97	37	119	2.90	1.301
8.	Volleyball court are well maintained	M.O.E.	2	1	1	-	5	3.00	1.323
		Principals	4	3	3	1	1	3.67	1.303
		Teachers	75	43	68	39	134	2.93	1.353
9.	Swimming pool are well maintained	M.O.E.	2	2	2	1	2	3.22	1.394
		Principals	1	4	1	-	6	3.00	1.128
		Teachers	71	66	45	58	119	2.92	1.397
10.	Handball courts are well maintained	M.O.E.	1	2	-	2	4	2.56	1.424
		Principals	4	3	4	1	-	3.75	1.215
		Teachers	85	54	36	68	116	2.91	1.490

In table 15, items 1-10 reveal the opinion of stakeholders on the maintenance of games and recreational facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that athlete tract are well maintained for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.33, Principal is 2.92 and teachers is 3.02. From item 2, the responses of the respondents were all accepted that stadia

adequately maintained with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that soccer pitch are well maintained where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, there is maintenance of basketball in the schools. Item 5 were also all agree that lawn tennis court is well maintained in school. In item 6, there is general accepted from the respondents that gymnasia are well maintained. Item 7 also show that swimming pool is adequately maintained with the mean score of 3.89 for MOE, 3.82 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that badminton and volleyball are well maintained in the schools. Item 10 show that handballs are well maintained for the students in the school with decision mean of 4.11 representing MOE, 3.17 for principal and 3.25 for teachers.

Research Question 7: What are the provision welfare facilities in secondary schools in Zaria Education Zone, Kaduna State?

Table 16 revealed the opinions of officials of ministry of education, principals and teachers on the provision of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 16: Opinions of Officials of MOE, Principals and Teachers on the Provision of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State.

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	D	SD		
1.	School buses are adequately provided	M.O.E.	3	2	-	-	4	3.44	1.424
		Principals	4	5	2	-	1	4.00	953
		Teachers	122	52	43	39	103	3.29	1.503
2.	Accommodation are adequately	M.O.E.	4	-	2	1	2	3.44	1.590
	Provided	Principals	4	-	-	3	5	2.58	1.881
		Teachers	96	48	68	39	108	3.13	1.420
3.	Pipe borne water is adequately	M.O.E.	7	1	-	-	1	4.56	1.014
	Provided	Principals	3	5	-	-	4	3.58	1.240
		Teachers	88	54	77	40	100	3.11	1.400
4.	Electricity is adequately provided	M.O.E.	3	1	3	-	2	3.56	1.236
		Principals	4	1		2	5	3.00	1.651
		Teachers	93	72	74	16	104	3.32	1.293
5.	Medical facilities are adequately	M.O.E.	3	2	2	1	1	3.56	1.424
	Provided	Principals	3	3	-	-	6	3.25	1.357
		Teachers	102	56	63	37	101	3.21	1.435
6.	Toilet/sanitary facilities are adequately	M.O.E.	4	1	1	1	2	3.56	1.590
	Provided	Principals	5	2	1	2	2	3.50	1.624
		Teachers	94	64	74	42	85	3.21	1.399
7.	Relaxation centres are adequately	M.O.E.	2	2	3	-	2	3.44	1.130
	Provided	Principals	1	5	-	1	5	3.00	1.279
		Teachers	85	61	57	43	113	3.04	1.447
8.	Staff/students common rooms are	M.O.E.	1	1	2	4	1	2.33	1.500
	adequately provided	Principals	2	5	-	4	1	3.00	1.651
		Teachers	90	78	77	40	74	3.26	1.386
9.	Social centres are adequately provided	M.O.E.	1	1	1	2	4	2.44	1.333
		Principals	5	3	-	2	2	3.58	1.621
		Teachers	72	41	70	51	125	2.85	1.396
10.	Training and development of staff are	M.O.E.	2	1	1	2	3	3.78	1.563
	adequately provided	Principals	4	3	-	2	3	3.33	1.614
		Teachers	118	86	52	40	63	3.48	1.426

In table 16, items 1-10 reveal the opinion of stakeholders on the provision of welfare facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that school bus are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.44, Principal is 4.00 and teachers is 3.29. From item 2, the responses of the respondents were all accepted that accommodation is provided

with the mean score representing the MOE 3.44, principal 2.52 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that pipe born water is provided where the mean score representing the principals 4.56, teachers 3.58 and 3.32 for teachers. In item 4, show provisions of electricity in the schools. Item 5 were also all agreed that medical facilities are provided in school. In item 6, there is general agreed from the respondents that toilet/sanitary facilities are provided. Item 7 also show that relaxation centre is provided in the school with the mean score of 3.44 for MOE, 3.00 for principal and 3.04 for teachers. From item 8 and 9, the respondents were all accept that staff students' common room and social centre are provided in the schools. Item 10 show that training and development of staff are provided for the students in the school with decision mean of 3.78 representing MOE, 3.33 for principal and 3.48 for teachers.

Research Question 8: Are the welfare facilities in secondary schools in Zaria Education Zone, Kaduna State maintained?

Table 17 revealed the opinions of officials of ministry of education, principals and teachers on the maintenance of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.

Table 17: Opinions of Officials of MOE, Principals and Teachers on the Maintenance of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

SN	Item Statement	Respondents	Response Categories					Mean	Std. dev.
			SA	A	U	SD	D		
1.	School buses are well maintained	M.O.E.	3	1	-	-	5	3.22	1.481
		Principals	1	3	1	2	5	2.67	1.303
		Teachers	86	56	82	27	108	3.14	1.371
2.	Accommodation are well maintained	M.O.E.	2	2	1	1	3	3.11	1.453
		Principals	4	2	3	-	3	3.58	1.240
		Teachers	95	50	92	35	107	3.05	1.316
3.	Pipe borne water facilities are well	M.O.E.	4	1	1	1	2	3.56	1.590
	Maintained	Principals	5	-	2	4	1	3.08	1.832
		Teachers	98	57	76	27	101	3.23	1.402
4.	Electrical appliances are well	M.O.E.	4	-	-	2	3	3.11	1.833
	Maintained	Principals	3	3	1	1	4	3.25	1.422
		Teachers	101	53	52	38	115	3.14	1.469
5.	Medical facilities are well maintained	M.O.E.	5	-	1	-	3	3.78	1.481
		Principals	3	1	3	3	2	2.92	1.564
		Teachers	113	49	61	36	100	3.27	1.440
6.	Toilet/sanitary facilities are well	M.O.E.	3	2	1	-	3	3.56	1.333
	Maintained	Principals	3	5	1	-	3	3.67	1.155
		Teachers	98	49	72	17	123	3.23	1.334
7.	Relaxation centres are well	M.O.E.	3	1	2	1	2	3.33	1.500
		Principals	1	4	1	-	6	3.00	1.128
		Teachers	95	70	72	30	92	3.27	1.373
8.	Staff/students common rooms are	M.O.E.	4	-	2	2	1	3.33	1.732
	well maintained	Principals	1	4	2	2	3	2.92	1.311
		Teachers	107	48	61	29	114	3.22	1.426
9.	Social centres are well maintained	M.O.E.	2	3	1	1	2	3.33	1.414
		Principals	5	2	1	2	2	3.50	1.624
		Teachers	123	69	52	37	78	3.44	1.440
10.	Training and development of staff	M.O.E.	3	1	2	1	2	3.33	1.500
	are regularly reviewed	Principals	5	2	2	3	-	3.50	1.679
		Teachers	87	81	30	93	68	2.99	1.579

In table 17, items 1-10 reveal the opinion of stakeholders on the maintenance of welfare facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that school buses are well maintained for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.22, Principal is 2.27 and teachers is 3.14. From item 2, the responses of the respondents were all accepted that accommodation provided are well maintained with the mean score representing the MOE

3.11, principal 3.58 and teacher is 3.05. In respect to item 3, it was also accepted from the responses of the respondents that pipe born water is maintained where the mean score representing the principals 3.56, teachers 3.08 and 3.32 for teachers. In item 4, electricity is well maintained in the schools. Item 5 were also all agreed that medical facilities are maintained in school. In item 6, there is general agreed from the respondents that toilet/sanitary facilities are well maintained. Item 7 also show that relaxation centre is maintained with the mean score of 3.33 for MOE, 3.00 for principal and 3.27 for teachers. From item 8 and 9, the respondents were all accept that staff students' common room and social centre provided are maintained in the schools. Item 10 show that training and development of staff is maintained for the students in the school with decision mean of 3.33 representing MOE, 3.50 for principal and 2.99 for teachers.

4.4 Hypotheses Testing

All the eight null hypotheses were tested using Analysis of Variance (ANOVA) at 0.05 alpha level of significance.

Hypothesis 1

There is no significant difference effect from the availability of teaching facilities in secondary schools in Zaria Education Zone Kaduna.

Table 18: Summary of Analysis of Variance (ANOVA) on the Availability of Teaching Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum Square	Df	Mean Square	F	Prob.	F.critical
Between groups	60.417	2	30.209	.333	.717	3.23
Within groups	34824.699	384	90.689			
Total	**34885.116**	**386**				

The table 18 shows f-ratio value (.333) at 2 df 384 and at the level 0.05. The critical value (3.23) is greater than f. ratio values (.333), the probability level of significance P (.717) is greater than 0.05. This means that there is no significant effect from the provision of teaching facilities in secondary schools in Zaria Education Zone Kaduna .Therefore, the null hypothesis is retained.

Hypothesis 2

There is no significant difference effect from the maintenance of teaching facilities in secondary schools in Zaria Education Zone Kaduna.

Table 19: Summary of Analysis of Variance (ANOVA) on the Maintenance of Teaching Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum of Square	Df	Mean Square	F	Prob.	F.critical
Between groups	210.715	2	105.357	2.780	.063	3.23
Within groups	14553.151	384	37.899			
Total	**14763.866**	**386**				

The table 19 shows f-ratio value (2.780) at 2 df 384 and at the level 0.05. The critical value (3.23) is greater than f. ratio values (2.780), the probability level of significance P (.063) is greater than 0.05. This means that there is no significant effect from the maintenance of teaching facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained.

Hypothesis 3

There is no significant difference impact from the availability of learning facilities in secondary schools in Zaria Education Zone Kaduna.

Table 20: Summary of Analysis of Variance (ANOVA) on the Availability of Learning Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum Square	Df	Mean Square	F	Prob.	F.critical
Between groups	200.062	2	100.031	1.587	.206	3.23
Within groups	24197.773	384	63.015			
Total	**24397.835**	**386**				

The table 20 shows f-ratio value (1.587) at 2 df 384 and at the level 0.05. The critical value (3.52) is less than f. ratio values (1.587), The probability level of significance P(.206) is greater than 0.05. This means that there is a significant impact from the provision of learning facilities in secondary schools in Zaria Education Zone Kaduna state. Therefore, the null hypothesis is retained.

Hypothesis 4

There is no significant difference impact from the maintenance of learning facilities in secondary schools in Zaria Education Zone Kaduna.

Table 21: Summary of Analysis of Variance (ANOVA) on the Maintenance of Learning Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum of Square	Df	Mean Square	F	Prob.	F.critical
Between groups	126.757	2	63.379	1.260	.285	3.23
Within groups	19312.255	384	50.292			
Total	**19439.013**	**386**				

The table 21 shows f-ratio value (1.260) at 2 df 384 and at the level 0.05. The critical value (3.23) is less than f. ratio values (1.260). The probability level of significance P (.285) is greater than 0.05. This means that there is a significant impact from the maintenance of learning facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained.

Hypothesis 5

There is no significant different on the availability of welfare facilities in secondary schools in Zaria Education Zone Kaduna State.

Table 22: Summary of Analysis of Variance (ANOVA) on the availability of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum of Square	Df	Mean Square	F	Prob.	F.critical
Between groups	257.277	2	128.639	1.592	.205	3.23
Within groups	31027.023	384	80.800			
Total	**31284.300**	**386**				

The table 22 shows f-ratio value (1.592) at 2 df 384 and at the level 0.05. The critical value (3.23 is greater than f. ratio values (1.592). The probability level of significance P (.205) is greater 0.05. This means that there is no significant difference between the respondents on improvement from the provision of welfare facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained

Hypothesis 6

There is no significant improvement from the maintenance of welfare facilities in secondary schools in Zaria Education Zone Kaduna

Table 23: Summary of Analysis of Variance (ANOVA) on the Maintenance of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	**Sum of Square**	**Df**	**Mean Square**	**F**	**Prob.**	**F.critical**
Between groups	154.581	2	77.291	1.219	.297	3.23
Within groups	24338.582	384	63.381			
Total	**24493.163**	**386**				

The table 23 shows f-ratio value (1.219) at 2 df 384 and at the level 0.05. The critical value (3.23 is greater than f. ratio values (1.219). The probability level of significance P (.297) is greater 0.05. This means that there is no significant difference between the respondents on the maintenance of welfare facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained.

Hypothesis 7

There is no significant improvement from the availability of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna

Table 24: Summary of Analysis of Variance (ANOVA) on the availability of Recreation and Games Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum of Square	Df	Mean Square	F	Prob.	F.critical
Between groups	234.821	2	17.411	.252	.778	3.23
Within groups	26581.365	384	69.222			
Total	**26616.186**	**386**				

The table 23 shows f-ratio value (.252) at 2 df 384 and at the level 0.05. The critical value (3.23) is greater than f. ratio values (.252). The probability level of significance P (.778) is greater 0.05. This means that there is no significant difference between the respondents on improvement from the provision of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained.

Hypothesis 8

There is no significant different on the maintenance of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna

Table 25: Summary of Analysis of Variance (ANOVA) on the Maintenance of Recreation and Games Facilities in Secondary Schools in Zaria Education Zone, Kaduna State

Status	Sum of Square	Df	Mean Square	F	Prob.	F.critical
Between groups	228	2	14.203	.200	.819	3.23
Within groups	27262.529	384	70.996			
Total	**27290.935**	**386**				

The table 25 shows f-ratio value (.200) at 2 df 384 and at the level 0.05. The critical value (3.23) is greater than f. ratio values (.200). The probability level of significance P (.819) is greater 0.05. This means that there is no significant difference between the respondents on the maintenance of recreational and games facilities in secondary schools in Zaria Education Zone Kaduna. Therefore, the null hypothesis is retained.

4.5 Summary of Hypotheses Testing

This section shows the summary of all the four null hypotheses tested in the course of this study.

Table 26: The summary of the Four Null Hypotheses Tested for the Study

S/N	Ho Statement	Statistical Tested Used	Result	Level of Sig.	Decision
1	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the provision of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.	Analysis of variance (ANOVA)	f-ratio is .333, while f-critical is 3.23 level of significance	0.05	**H_1** was retained. This means there is no significant difference in the opinions of the respondents
2	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the maintenance of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State.	Analysis of variance (ANOVA)	f-ratio is 2.780, while f-critical is 3.23 level of significance	0.05	**H_2** was retained. This means there is no significant difference in the opinions of the respondents
3	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the provision of learning facilities in secondary schools in Zaria Education Zone, Kaduna State	Analysis of variance (ANOVA)	f-ratio is 1.587, while f-critical is 3.23 level of significance	0.05	**H_3** was retained. This means there is no significant difference in the opinions of the respondents
4	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State	Analysis of variance (ANOVA)	f-ratio is 1.260, while f-critical is 3.23 level of significance	0.05	**H_4** was retained. This means there is no significant difference in the opinions of the respondents
5	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the provision of Games facilities in secondary schools in Zaria Education Zone, Kaduna State	Analysis of variance (ANOVA)	f-ratio is 1.592, while f-critical is 3.23 level of significance	0.05	**H_5** was retained. This means there is no significant difference in the opinions of the respondents
6	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the maintenance of Games facilities in secondary schools in Zaria Education Zone, Kaduna State	Analysis of variance (ANOVA)	f-ratio is 1.219, while f-critical is 3.23 level of significance	0.05	**H_6** was retained. This means there is no significant difference in the opinions of the respondents
7	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the provision of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.	Analysis of variance (ANOVA)	f-ratio is .252, while f-critical is 3.23 level of significance	0.05	**H_7** was retained. This means there is no significant difference in the opinions of the respondents
8	There is no significant difference in the opinions of officials of ministry of education, principals and teachers on the maintenance of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.	Analysis of variance (ANOVA)	f-ratio is .200, while f-critical is 3.23 level of significance	0.05	**H_8** was retained. This means there is no significant difference in the opinions of the respondents

4.6 Summary of Major Findings

The study revealed that:

1. teaching facilities such as classroom, science laboratories, functional workshops, chairs/tables and public address system were adequately provided in secondary schools in Zaria Education zones in Kaduna State.
2. teaching facilities provided were well maintained in secondary schools in Zaria Education zones in Kaduna State.
3. learning facilities such as library, computers/internet, textbooks/exercise books and stationeries were adequately provided in secondary schools in Zaria Education zones in Kaduna State.
4. learning facilities provided were well maintained in secondary schools in Zaria Education zones in Kaduna State.
5. recreational and games facilities such as games and sport, common room, cafeteria, and parks facilities were adequately provided in secondary schools in Zaria Education zones in Kaduna State.
6. recreational and games facilities in secondary schools in Zaria Education zones in Kaduna State were well maintained.
7. welfare facilities such as school buses, water facilities, guidance and counseling offices and security facilities were adequately provided in secondary schools in Zaria Education zones in Kaduna State.
8. welfare facilities provided in secondary schools in Zaria Education zones in Kaduna State were well maintained.

4.7 Discussions of the Findings

This study was aimed at assessing the stakeholders' perceptions on the provision, and maintenance of school facilities in secondary schools in Zaria Education zones in Kaduna State. It objectives were to assess the followings: the provision of teaching facilities in secondary schools in Zaria Education zones in Kaduna State, the maintenance of teaching facilities in secondary schools in Zaria Education zones in Kaduna State, the provision of learning facilities in secondary schools in Zaria Education zones in Kaduna State, the maintenance of learning facilities in secondary schools in Zaria Education zones in Kaduna State, the provision of sport and recreational facilities in secondary schools in Zaria Education zones in Kaduna State, the maintenance of sport and recreational facilities in secondary schools in Zaria Education zones in Kaduna State, the provision of welfare facilities in secondary schools in Zaria Education zones in Kaduna State and the maintenance of welfare facilities in secondary schools in Zaria Education zones in Kaduna State, Nigeria.

However, to give general description of the respondents on the issues raised, frequencies and simple percentage were used. The following are discussions arising from the major findings of the study. In table 10, items 1-10 reveal the opinion of stakeholders on the provision of teaching facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that Classrooms are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and teachers is 3.82. From item 2, the responses of the respondents were all accepted that science laboratory is provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the

responses of the respondents that laboratories are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, provisions of chairs in the schools. Item 5 were also all agree that tables are provided in school. In item 6, there is general accepted from the respondents that public address system are provided. Item 7 also show that flip chart is adequately provided with the mean score of 3.89 for MOE, 3.82 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that models and specimen are provided in the schools. Item 10 shows that workshops are not provided for the students in the school with decision mean of 2.89 representing MOE, 2.75 for principal and 2.80 for teachers. This is line with Lawwanson and Gede (2011) opined that "it is of utmost importance that the availability of teaching facilities will duly contribute to the successful implementation of school programme. These teaching facilities must not only be provided, they must also be in good condition to enhance teaching and learning process. This implies sound maintenance culture.

In table 11, items 1-10 reveal the opinion of stakeholders on the maintenance of teaching facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that Classrooms are well maintained in the school, this could be seen from the responses of the respondents where the mean of MOE is 3.23, Principal is 3.82 and teachers is 4.45. From item 2, the responses of the respondents were all accepted that science chalkboard provided are well maintained with the mean score representing the MOE 3.92, principal 3.54 and teacher is 3.00. In respect to item 3, it was also accepted from the responses of the respondents that laboratories are well maintained where the mean score representing the MOE 3.00, principal 3.50 and 2.64 for teachers. In item 4, shows that chairs are well maintained in the schools. Item 5 were also all agree that tables are well

maintained in school. This is supported by the view of Emakuma (2013) who says that "maintenance facilities become important because of the extent that it helps in improving teaching-learning effectiveness".

In item 6, there is general accepted from the respondents that public address system provided are maintained. Item 7 also show that flip charts provided are maintained in the school with the mean score of 3.25 for MOE, 3.98 for principal and 3.82 for teachers. From item 8 and 9, the respondents were all accept that models and specimen are well maintained in the schools. Item 10 shows that workshops are not maintained in the students in the school with decision mean of 2.82 representing MOE, 2.56 for principal and 1.92 for teachers.

In table 12, items 1-10 reveal the opinion of stakeholders on the provision of learning facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that computers are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and teachers is 3.82. From item 2, the responses of the respondents were all accepted that science libraries is provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that internet ICT are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4 shows, provisions of chairs in the schools. Item 5 were also all disagreed that microscope are provided in school. In item 6, there is general disagreed from the respondents that video CD are provided. Item 7 also show that audio CD is not provided with the mean score of 2.67 for MOE, 2.08 for principal and 3.45 for teachers. From item 8 and 9, the respondents were all accept that textbooks and stationeries

are provided in the schools. Item 10 shows that exercise books are provided for the students in the school with decision mean of 3.22 representing MOE, 3.75 for principal and 3.69 for teachers.

In table 13, items 1-10 reveal the opinion of stakeholders on the provision of games and recreational facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that athlete tract are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.11, Principal is 3.40 and teachers is 3.82. From item 2, the responses of the respondents were all accepted that stadia is provided with the mean score representing the MOE 3.00, principal 3.96 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that soccer pitch are provided where the mean score representing the principals 4.56, teachers 3.92 and 3.32 for teachers. In item 4, provisions of basketball in the schools. Item 5 were also all agree that lawn tennis court is provided in school. In item 6, there is general accepted from the respondents that gymnasia are provided. Item 7 also show that swimming pool is adequately provided with the mean score of 3.89 for MOE, 3.82 for principal and 3.45 for teachers. This is line with Emetarom (2014), sport and recreational facilities are the physical and spatial enablers of teaching and learning which will increase the production of results from item 8 and 9, the respondents were all accept that badminton and volleyball are provided in the schools. Item 10 shows that handballs are adequately provided for the students in the school with decision mean of 4.11 representing MOE, 3.17 for principal and 3.25 for teachers.

In table 14, items 1-10 reveal the opinion of stakeholders on the provision of welfare facilities in secondary schools in Zaria education zone in Kaduna State. Item 1

shows that school bus are provided for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.44, Principal is 4.00 and teachers is 3.29. From item 2, the responses of the respondents were all accepted that accommodation is provided with the mean score representing the MOE 3.44, principal 2.52 and teacher is 3.82. In respect to item 3, it was also accepted from the responses of the respondents that pipe born water is provided where the mean score representing the principals 4.56, teachers 3.58 and 3.32 for teachers. In item 4, provisions of electricity in the schools. Item 5 were also all agreed that medical facilities are provided in school. In item 6, there is general agreed from the respondents that toilet/sanitary facilities are provided. Item 7 also show that relaxation centre is provided in the school with the mean score of 3.44 for MOE, 3.00 for principal and 3.04 for teachers. From item 8 and 9, the respondents were all accept that staff students' common room and social centre are provided in the schools. Item 10 show that training and development of staff are provided for the students in the school with decision mean of 3.78 representing MOE, 3.33 for principal and 3.48 for teachers.

In table 15, items 1-10 reveal the opinion of stakeholders on the maintenance of welfare facilities in secondary schools in Zaria education zone in Kaduna State. Item 1 shows that school buses are well maintained for the students, this could be seen from the responses of the respondents where the mean of MOE is 3.22, Principal is 2.27 and teachers is 3.14. From item 2, the responses of the respondents were all accepted that accommodation provided are well maintained with the mean score representing the MOE 3.11, principal 3.58 and teacher is 3.05. In respect to item 3, it was also accepted from the responses of the respondents that pipe born water is maintained where the mean score representing the principals 3.56, teachers 3.08 and 3.32 for teachers. In item 4, electricity is

well maintained in the schools. Item 5 were also all agreed that medical facilities are maintained in school. In item 6, there is general agreed from the respondents that toilet/sanitary facilities are well maintained. Item 7 also show that relaxation centre is maintained with the mean score of 3.33 for MOE, 3.00 for principal and 3.27 for teachers. From item 8 and 9, the respondents were all accept that staff students' common room and social centre provided are maintained in the schools. Item 10 show that training and development of staff is maintained for the students in the school with decision mean of 3.33 representing MOE, 3.50 for principal and 2.99 for teachers. Welfare facilities generally make teaching and learning less stressful. Nwakpa (2012) submitted that no effective education programe can exist without adequate provision and maintenance of teachers and students welfare. Welfare facilities are fast and becoming more important at all level of education in the world, secondary schools in Zaria Education zones in particular and Nigeria in general must not be left behind in this trends.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study has focused on assessing the provision and maintenance of school facilities in secondary schools in Zaria Education Zone, Kaduna State, Nigeria This chapter will be discussed under the following headings:

- Summary of the study
- Conclusion
- Recommendations

5.2 Summary

This study assessed the provision and maintenance of school plant in secondary schools in Zaria Education Zone, Kaduna State, Nigeria. The study was conducted with eight objectives to; assess the provision of teaching facilities in secondary schools in Zaria Education Zone, assess the maintenance of teaching facilities in secondary schools in Zaria Education Zone Kaduna State; determine the provision of learning facilities in secondary schools in Zaria Education Zone, Kaduna State; determine the maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State, examine the provision of games and recreational facilities in secondary schools in Zaria Education Zone, Kaduna State; examine the maintenance of games and recreational facilities in secondary schools in Zaria Education Zone, Kaduna State, find out the provision of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State and find out the maintenance of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State, Nigeria. Also, eight research questions were answered while eight null

hypotheses were tested. The total of nine (9) officials of ministry of education, twelve (12) principals and three hundred and fifty-nine (359) teachers responded to the instrument. Survey design was adopted for the study and data was collected using a researcher designed questionnaire. The data gathered were analyzed using Analysis of Variance (ANOVA) statistics and hypotheses were tested at 0.05% level of significance. Findings revealed among others that no significant difference exists in the opinions of respondents on the provision and maintenance of teaching facilities in secondary schools in Zaria Education Zone, Kaduna State. Also, findings show no significant difference in the opinions of respondents on the provision and maintenance of learning facilities in secondary schools in Zaria Education Zone, Kaduna State. Findings also show no significant difference in the opinions of respondents on the provision and maintenance of recreation and games facilities in secondary schools in Zaria Education Zone, Kaduna State. Findings show no significant difference in the opinions of respondents on the provision and maintenance of welfare facilities in secondary schools in Zaria Education Zone, Kaduna State.

Based on the findings, recommendations were made that, teaching facilities are all the things that are needed for effective teaching and learning process to take place, government should provide and maintain the teaching facilities in the school; and that learning facilities makes learning to be more real to the students and also serve as great assistance to the teacher in the school. Hence, principals should ensure that learning facilities are adequately provided and maintained in the schools.

5.3 Conclusions

This study attempted to advance an argument that school plant facilities provision and maintenance are a necessity for effective teaching and learning process in the secondary school.

- This study opines that provision and maintenance of school plant facilities is the yardstick that fosters quality learning and enhanced students' academic performance. Inadequacies in the provision and maintenance of teaching facilities, learning facilities, games and recreational facilities, and welfare facilities, are believed to affect not only on teaching and learning process but also students' performance.
- The major factors encouraging school plant facilities depreciation are poor funding, lack of maintenance culture, excess pressure on available facilities, and delayed maintenance amongst others. This study finding revealed that school plant facilities in the secondary schools in Zaria Education Zone are generally in a state of disrepair.
- The findings further revealed that the maintenance carried out on school plant facilities were inadequate. An insignificant number of school plant facilities are provided and maintained in the secondary schools in Zaria Education Zone.
- Finally, teaching facilities, learning facilities, game and recreational facilities and welfare facilities are all the things that are needed for effective teaching and learning process to take place. Consequently, government should provide these facilities and the funds for maintenance while principals should maintain the school plant facilities provided.

- In a nutshell, conclusions were drawn based on the findings of the study that suggest that provision and maintenance of school plant facilities in secondary schools in Zaria Education zones in Kaduna State, are grossly inadequate for effective teaching and learning. Learning facilities like Libraries are provided and well maintained in secondary schools in Zaria Education Zone, Kaduna State. Games and recreational facilities like basketball are adequately provided and well maintained in the majority of the schools in Zaria Education Zone, Kaduna State.
- It was found that, welfare facilities have been described as an effective tool for Education development in general. The study also identified that it is the government that shows negative attitudes on the adequate provision of welfare facilities. Schools managers play their parts only when there is adequate provision of these facilities i.e. utilization, maintenance and administration.

5.4 Recommendations

From the findings of the study, the following recommendations are made:

- Teaching facilities are all the things that are needed for effective teaching and learning process to take place, school administrators and government urgently need to upgrade teaching facilities to meet up with modern demands of secondary school education. Digital facilities should be provided in schools.
- While the schools managers on their part should also try to maintain and manage classroom, science laboratories, functional workshops, chairs/tables and public address system facilities provided in the school.

- Learning facilities makes learning to be more real to the students and also serve as great assistance to the teacher in the school. Hence, principals should ensure that learning facilities are adequately provided in the schools.
- In order to enhance higher productivity in schools, good and adequate learning facilities such as library materials, computers with internet facilities and constant electricity supply provided to the school should be well maintained. While regular school inspection and a good maintenance programme are recommended to protect the existing school facilities.
- Principals should ensure that game and recreational facilities are adequately provided in schools.
- Education administrators should also assist schools by building maintenance cost into education budget to take care of deterioration of the recreation and games facilities in the secondary schools in Zaria education zones in Kaduna State.
- Welfare facilities like toilet/sanitary should be adequately provided in secondary schools in Zaria Education Zone, Kaduna State.
- Finally, Accommodations are not enough, for both staff and student. It becomes necessary for managers of secondary schools in Zaria Education zones in Kaduna State to adequately maintain these facilities provided for the staff and students in secondary schools in Zaria Education Zone, Kaduna State, Nigeria.

5.5 Suggestions for Further Studies

Further studies can be carried out in the following areas:

- Influence of facility management on teachers' productivity in secondary schools.

- Impact of the provision of social centres on student's performance in secondary schools.
- An appraisal of facility management in public and private secondary schools.

REFERENCES

Abulu, K. and Omovweh, N.O. (2007). The Effect of Down stream pollution on the Niger Delta Environment. *Journal of social science*. 7 (2) 11-12.

Adeboyeje, R. A. (2000). A practical approach to effective utilisation and maintenance of physical facilities in Secondary schools. In J. O. Fadipe & E. E. Oluchukwu (Eds.), A publication of The National Institute for Education Planning and Administration (pp. 88-103). Ondo, Nigeria.

Adeboyeje, R.A. (2000). *Management of School Physical facilities.* Ibadan: Foundation Publications. *Vol. 6 (2) Serial No. 25, April, 2012. Pp. 192-205*

Adeogu, A.O. (2008). An Investigation into the Maintenance of School Facilities in Ekiti State, Nigeria. *Nigerian Journal of Education Administration and Planning* 8 (1), pp 11- 20.

Adesina, S. (1990). Education management, Enugu: Fourth Dimensions Publications.

Afolabi, F. O. (2002). The school building and its environment. Implication on the achievement of functional Universal Basic Education programme in Ondo State. In T. Ajayi, J. O. Fadipe, P. K. Ojedele, & E. E. Oluchukwu (Eds.),Planning and Administration of Universal Basic Education in Nigeria (pp. 101-110). Ondo: National Institute for Education Administration and Planning (NIEPA).

Agbo, H. A., Envuladu, E. A., Adah, U. G. and Zoakah A. I. (2012). An assessment of toilet facilities in secondary schools in Jos North Local Government Area of Plateau State. *Greener Journal of Education Research* ISSN: 2276-7789 Vol. 2 (4) November, pp. 091 - 094.

Ajayi, A. O. (1999). Resources utilization: The Mandate of Education Managers. Faculty Lecture Series, Faculty of Education University of Ibadan, Ibadan.

Ajayi, I. A. and Oguntoye, H. O. (2003). Motivation as correlate of teachers' job performance in Ogun State Secondary Schools. *UNAD Journal of Education*. (3):155—162.

Ajayi, J. A. (2007). Issues in school management, Lagos: Bolabay Publisher

Akinsolu, R.A. (2004*).* Provision and Management of Facilities in Nigerian Primary Schools. In E.O. Fagbemiye, J.B. Babalola, M. Fabunmi and Ayeni (eds). *Management of Primary and Secondary Education in Nigeria*. NAEAP publications.

Allen, A. A. (2015). Effective School Management and Supervision: Imperative for Quality Education Service Delivery. *African education Review, 9*(3), 62-74. DOI: http://dx.doi.org/10.4314/afrrev.v9i3.6.

Amanchukwu, R. N. (2010). Indiscipline As A Contributory Factor To the Falling Standard of education In Nigeria. Issues on Development: *A Multi-disciplinary International Journal on Sustainable Development*, 6(4),

Amanchukwu, R.N. & Obijuru, J.U.N. (2013). Dilemma in the classroom: A Hindrance to Academic Success. *International Journal of Education Foundations & Management, 1* (1), 1-11

Amanchukwu, R.N. and Ololube, N. P. (2015). Managing School Plant for Effective Service Delivery in Public Secondary Schools in Rivers State of Nigeria. Human Resource Management Research p-ISSN: 2169-9607, e-ISSN: 2169-9666; 5(4): PP 95-102 doi:10.5923/j.hrmr.20150504.02.

Asiabaka, I. P. (2008). The Need for Effective Facility Management in Schools in Nigeria. *New York Science Journal*, 1(2), 10-21.

Asiyai, A. A. (2010). Effect of Oil Pollution on Education activities in Delta South Senatorial District of Delta State. M.Sc (Ed) Dissertation Delta State University, Abraka.

Audu, R., Umar, I. Y. and Idris, A. M. (2013) Facilities Provision and Maintenance: Necessity for Effective Teaching and Learning in Technical Vocational Education. *IOSR Journal of Research & Method in Education (IOSR-JRME)* e-ISSN: 2320–7388,p-ISSN: 2320–737X Volume 3, Issue 1 (Sep. –Oct. 2013), PP 28-32 www.iosrjournals.org

Ayeni, A. J. and Akinola, O. B. (2008). Influence of principals' leadership styles and motivation of teachers on quality assurance in secondary school: A case study of Ondo State. *Ife Journal of Theory and Research in Education*, 2 (1&2), 162-170.

Ayodele, J. B. (2004). The Role of Head teacher in School Plant Management and Maintenance. In E.O. Fagbemiye, J.B. Babaloa et al (eds) *Management of Primary and Secondary School Education in Nigeria*. NAEAP Publications.

Bello-Osagie, K., & Olugbamila, A. (2009, December 31). Events that shape education. The Nation, p. B2.

Bloom, B. (1978). Environments for Learning in Britain. London: N.F.E.R. Publishing.

Burkett, S. W. and Bowers, J. K. (1987) Relationship of Students Achievement and Characteristics in two selected School Facility Environment Settings. Paper

presented at the 64th annual International conference of the Council of Education Facility Planners. Edmonton, Alberta, Canada. October 3-7 ED286278.

Castaldi, B. (1977). *Education Facilities: Planning, Remodelling and Management*. Boston: Mass, Allyn and Bacon.

Castaldi, B. (1994). Education facilities: Planning Management & Modernization. Needham Heights, MA: Allyn & Bacon.

Chan, T. (199). The Impacts of School Building Age on Pupils Achievement. Greenville School districts (Ed1912138).

Daugherty, N.J. (1998). Outdoor recreation safety. Champaign: School and Community Safety Society of America.

Durosaro, D. O. (1998). School plant management in Nigeria: Trends, issues and problems in Management of Nigerian Education - Project monitoring and school plant maintenance. A publication of the National Institute for Planning and Administration, 2, 53-63.

Durosaro, D.O. (1998). *School Plant Management practice in Nigeria: Trends Issues and Problems*. In A.A. Olagboye, J.O. Fadipe (Eds). Management of Nigerian Education: Project Monitoring and School Plant Maintenance, Ondo: NEPA

Earthman, G. I. (2002). School facility conditions and student academic achievement. Los Angeles: University of California's Institute for Democracy, Education and Access. (http://www.ucla-idea.org)

Ebenezer, B.T. (2004). *A Stitch in Time Saves Nine: Cultivating a Maintenance Culture in Ghana*. www.ghanaweb.com Ghana home page/News Archive Retrieved August 2nd, 2009.

Ekanem, M. G. (1992). Towards providing effective and responsive sport program for the Nigeria youths. Manual of Nigeria Academy of Sports Administration, 1(1): 18-24.

Ekundayo, H.T. (2010). Administering Secondary Schools in Nigeria for Quality Output in the 21st Century: The Principals' Challenge. *European Journal of EDUCATION Studies* 2(3), 2010 ISSN 1946-6331 Ozean Publication pp 187-192.

Emetarom, U. C. (2004). Provision and Management of Facilities in Primary Schools in Nigeria: Implication for Policy Formulation. In E.O. fagbemiye, J.B. Babalola et al. *Management of Primary and Secondary Education in Nigeria.* NAEAP publication.

Fabumi, M. (1997). Differential Allocation of Education Resources and Secondary School Academic Performance Edo State (1989-1994). Unpublished doctoral Thesis

Fadipe, J. O. (2003). Quality control in education: the teacher factor. In T. E. Ajayi and J. Fadipe (eds) Skills improvement programme for effective performance of teachers in Nigerian schools. A publication of National Institute for Education Planning and Administration (NIEPA), Ondo. 128—143.

Fadipe, J.O. (1998). Modern Strategies of School Plant Maintenance. In A.A. Olagbeye and J.O. Fadipe (eds). Management of Nigeria Education: Project Monitoring and School Plant Maintenance Ondo: NEPA.

Fafunwa, A. B. (2010, October 13). Fafunwa's last interview: Remember me as somebody who promoted use of mother tongue in schools. The Punch, p 3

Farakash, D. (2002). Therapeutic Recreation Specialist. Director of Therapeutic Recreational Jewish Home and Hospital. Bronx Division. Retrieved from internet 19/01/03 http://www.samford-ed/group/staff/compress/objectives.html

Federal Republic of Nigeria. (1989). *National Policy on Education*. Nigerian Education Research and Development Council (N.E.R.D.C.) Press.

Federal Republic of Nigeria. (2004). *National Policy on Education*: Nigerian Education Research and Development Council (N.E.R.D.C.) Press.

Folawiyo, A. F. A. (2001). Concepts of leisure and recreation. Okota Isolo: Irede Printers Ltd.

Hallak, J. (1990). Investing of Future: Setting Education Priority in Development World. Paris: UNESCO. ILEP.

Hamdallah, A., Ozovehe, A. and Olanrewaju, S. (2013). Provision and Management of School Plant as a Correlate of Science Students Academic Performance. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.4, No.14, 2013 pp 102-110.

Hinum, M. (1999). Strategies for Managing Education Facilities. Track 3 of the UEF/P[EB/CAE International Symposium USA.

Hussaain, M. A., Iqbal, M. Z. and Akhtar, M. S. (2010). Technology based learning environment and student achievement in English as a foreign language in Pakistan. *Journal of World Academy of Science, Engineering, and Technology*, 61, 129-133.

Ibraheem, T. O. and Jimoh, G. K. (2006). Psycho-socio factors influencing sports participation among special students in selected secondary schools in Osun state. *Ilorin Journal of Health, Physical Education and Recreation*, 5: 119-123.

Ifeakor, A. C. and Okoli, J. N. (2010). Appraisal of the Availability and Utilization of New Technological Resources for Science Curriculum Delivery in Nigerian Universities. African Research Review Vol. 4(2) April, ISSN 2070-0083 (Online) Pp. 370-383.

Iheanacho, S. B. C., O'neill, C. B. and Idris-Adams, S. I. (2011). Provision and Management of Sports Facilities in Nigeria Universities in the 20th Centuries Aworom Annang: *African Journal of Culture, Philosophy and Society*, Volumn1 No 1, ISSN 2026-6553.

Ikoya, P. O. and Onoyase, D. (2008). Universal Basic Education in Nigeria: Availability of Infrastructures for Effective Programme Implementation. *Education Studies*.

Ipaye, B. (2002). Teachers' apathy to teaching. *Journal of All Nigeria Conference of Principals of Secondary Schools*, 2002, 185-198.

Kabido, A. I. (2003). The need for an autonomous local government sports administrative structure in Nigeria. *Journal of Research Health Sport Science*, 5(1): 49-52.

Lawal, A. O. (1996).The Role of Supervisors and Inspectors in improving Education Students Language arts, *Journal of Studies in Education*, Ilorin 1 (3) pp14-16.

Maxwell, I. E. (1999). School Building Renovation and Student's Performance: One District Experience. Scoffsdale, Ariz: Council of Education Faculties Planners, International. (ED443272).

McCullick, R. and George, M. D. (1999). Institutional theory in sports pedagogy 1997-1998. *International Journal of Physical Education*. Review Publication XXXVI, issue 2: 2nd Quarter.

Mgbodile, T. O. et al. (1986). *Education Administration and Supervision*. Institute of Education, U.N.N.

Morakinyo, E. O. and Atare, F. U. (2001). Indices of outdoor recreation participation among selected local government workers in Delta State. *Ibadan Journal of Education Studies*, 1(2): 361-369.

Mukherjee, B. (2000). A Review of Routine and Wavelength Assignment Approaches for Wavelength. Roughted Optical. *Journal of Optical Networking*.

Mull, R. F., Bayless, K. G., Ross, C. M. and Jamiesson, B. K. (1997). Recreational sports management. (3rd ed.) Champaign: The athletic Institute.

Nwagwu, N. A. (1978). Primary School Administration. Lagos: Macmillan.

Odigwe, F. N. and Eluwa, I. O. (2013). Appraising the State of Maintenance and Management of Available Secondary School Facilities on Students' Academic

Performance in Cross River State, Nigeria. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.4, No.24.

Oduyale, T. (2004). Scientific basis of recreation for youth in Nigeria's Education institutions. Multi-disciplinary approach to human kinetics and health education. A book of reading in honor of Prof. Yomi Awosika, 99-105.

Ogbodo, C. M. (1995). Managing Education Facilities in Schools. Peretomode, V. F. (Ed.), Introduction to Education Administration, Planning and Supervision (pp. 44-65). Lagos: Joja Education, Research and Publishers.

Ogonor, B. O. and Sani, G. A. (2001). Maintenance of secondary school facilities in Midwestern Nigeria in N.A. Nwaogu, E.T. Current issues in Education management in Nigeria. Benin: Ambik Press Ltd.

Ogundare, S. F. (1999). Community utilization of school facilities: An aspect of school community relationship in Nigeria. *Journal of the National Institute for Education Planning and Administration*, 29(1), 115-121.

Ogundele, M. O. (2012) Recreational facilities and secondary school students academic performance in Kwara State, Nigeria. *Journal of Vocational Education & Technology* Vol. 9 No. 2 ISSN: 1596-9606

Ojoawo, A. (1990). An Empirical Study of Factors Responsible for Poor Academic Performance in Secondary Schools in Oyo State. AJEM, $(1&2), 140-148.

Okebukola, P. (2002). Meeting the challenges of secondary school administration in Nigeria. *Journal of All Nigeria Conference of Principals of Secondary Schools*, 2002, 159-171.

Olagboye, A. A. (1998). *Promoting School Plant Maintenance Culture in Nigerian School System, Management of Nigerian Education:* Project Monitoring and School Plant Maintenance, NIEPA, Ondo.

Olagboye, A. A. (2004). Introduction to Education administration planning and supervision. Ikeja: Joja Education Research and Publishers Ltd.

Olasehinde, F.A.O. (1995).Constructing and using data gathering instruments in research methodology in education: An interdisciplinary approach S.A. Jimoh (ed.).University of Ilorin Library and Publication Committee.

Ololube, N. P. (2009). Understanding teachers' professional competencies for education effectiveness. Owerri: Spring Field Publishers

Ololube, N. P. (2013). Education Management, Planning and Supervision: Model for Effective Implementation. Owerri: SpringField Publishers.

Ololube, N. P., Kpolovie, P. J., Amaele, S., Amanchukwu, R. N., and Briggs, T. (2013). Digital Natives and Digital Immigrants: A study of Information Technology and Information Systems (IT/IS) Usage between Students and Faculty of Nigerian Universities. *International Journal of Information and Communication Technology Education*, 9(3), 42- 64. DOI:10.4018/jicte.2013070104.

Olutola, A. D. (1989). Education facilities and students' performance in West African school certificate examination. *International Journal Education Management*, 1(1), 17-24.

Omolawon, K. O. and Sanusi, M. (2006). Perceived determinants associated with non-participation of University of Ibadan. Academic staff in physical activities. *Journal of International Council for Health, Physical Education, Recreation, Sport and Dance*, 1(2): 97-100.

Omoruan, J. C. (1996). A handbook on physical education, sports, and recreation. Zaria: S. Akesome & Co.

Onyene, V. (2000). Dynamic Of Institutional Management: Towards Strategic Administrative Competence. Lagos: Sam Orient.

Owadiae, I. (2010, August 31). West African Senior School Certificate Examination result. The Punch, p. 39.

Owadiae, I. (2011, August, 11). West African Senior School Certificate Examination result.

Owoeye, J. S. (2000). The Effect of Interaction of location, Facilities and Class size on Academic Achievement of Secondary School Students in Ekiti State, Nigeria. Unpublished Doctoral Thesis, University of Ibadan, Ibadan.

Owuamanam, D. O. (2005).Threats to Academic Integrity in Nigerian Universities. Lead paper presented at the conference of the National Association of Education Researchers and Evaluators, University of Ado-Ekiti, June 13-17.

Quality Education Agency. (2010). Analysis of results of WAEC/NECO Senior Secondary School Certificate Examinations. Ondo state, Nigeria.

Sanusi, B. Y. (1998). Teachers job performance stress as a correlate to job satisfaction in selected Secondary schools in Ife Central Local Government zone of Osun State. Unpublished master thesis, Obafemi Awolowo University, Ile-Ife, Nigeria. The Nation, p. 4.

Tapping, R. M. (2014). How to Figure Out an Appropriate Sample for the Pilot Study, Retrieved from http://www.researchgate.net/post/ how to figure out appropriate sample for pilot study.

Uchendu, C. C. (2011) Human resource management and teachers' job performance for Sustainable development of secondary schools in Cross River State. The LEAJON: *An academic journal of interdisciplinary Studies*.2(2).

Uchendu, C. C., Ekanem, E. E. and Jonah, S. T. (2013). Resource Maintenance for the Provision of Education Services in Public and Private Secondary Schools in Rivers State, Nigeria. *European Journal of Business and Social Sciences,* Vol. 2, No. 1, pp 15-23, April 2013. URL: *http://www.ejbss.com/recent.aspx* ISSN: 2235 -767X.

UNESCO, (1984). Management and Maintenance in Use of Education Buildings and Equipment. Paris: UNESCO Press.

UNICEF (2000). Curriculum report card. Working paper series, Education Section Program Division. New York.

Wilcokson, D. (1994).Teachers Perspective on Underachievement. In Education Today, *Journal of the College of Perceptions*, 44(4), United Kingdom, Longman Publishers.

Xaba, M. I. (2012). A qualitative analysis of facilities maintenance: A School governance function in South Africa. *South African Journal of Education*, 32(2), 215-226.

Yabo, A. M. (2007). A Student Guide to Project Writing in Education Lifeline Education of Consultan. Sokoto Farfaru.

Yusuf, M. A. (2008). School Plant Planning and Secondary School Students' Learning Outcome in South West Nigeria. PhD dissertation. University of Ado Ekiti.

QUESTIONNAIRE ON THE ASSESSMENT OF AVAILABILITY AND MAINTENANCE OF SCHOOL PLANT IN SECONDARY SCHOOLS IN ZARIA EDUCATION ZONE, KADUNA STATE, NIGERIA

APPENDIX I

QUESTIONNAIRE

Department of Educational
Foundations and Curriculum.
Educational Administration and
Planning Section:
Ahmadu Bello University,
Zaria.

Dear Respondent,

This questionnaire is needed to complete this research work on the assessment of availability and maintenance of school plant in Secondary Schools in Zaria Education Zone, Kaduna State. It is purely based on the academic pursuit, all information provided in the questionnaire will be treated with utmost confidentiality.

Thank you for your cooperation.

Yours sincerely

Nweneka Anthony O.

APPENDIX II

SECTION A (Demographic Data)

Instruction: Please tick or fill the information appropriate to you.

1. Status: (a) Principal [ ] (b) Teacher [ ] (c) Official of MOE [ ]
2. Gender: (a) Male [ ] (b) Female [ ]
3. Educational Qualification: (a) Master's Degree [ ] (b) Bachelor's Degree [ ]
   (c) NCE [ ] (d) Others Specify.....
4. Age: (a) 25 – 30 yrs [ ] (b) 31 – 40 yrs [ ] (c) 41 – 50 yrs [ ]
   (d) 51 – 60 yrs [ ]
5. Years of Experience as Principal (a) 1 – 5 yrs [ ]
   (b) 6 – 10 yrs [ ] (c) 11 – 15 yrs [ ] (d) 16 and above [ ]
6. Location of School (a) Urban (b) Rural

SECTION B: An Assessment of Availability and Maintenance of Teaching Facilities in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria.

SN	Item Statement	SA	A	U	SD	D
1.	Classrooms are adequately provided.					
2.	Classrooms are well maintained.					
3.	Chalk Boards are adequately provided.					
4.	Chalk Boards are well maintained.					
5.	Laboratories are adequately provided.					
6.	Laboratories are well maintained.					
7.	Chairs are adequately provided.					
8.	Chairs are well maintained.					
9.	Tables are adequately provided.					
10.	Tables are well maintained.					
11.	Public address systems are adequately provided.					
12.	Public address systems are well maintained.					
13.	Flip Charts are adequately provided.					
14.	Flip Chart are well maintained.					
15.	Models are adequately provided.					
16.	Models are well maintained.					
17.	Specimens are adequately provided.					
18.	Specimens are well maintained.					
19.	Workshops are adequately provided					
20.	Workshops are well maintained.					

SECTION C: An Assessment of Availability and Maintenance of Learning Facilities in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria.

SN	Item Statement	SA	A	U	SD	D
21.	Computers are adequately provided.					
22.	Computers are well maintained.					
23.	Libraries are adequately provided.					
24.	Libraries are well maintained.					
25.	Internet/ICT is adequately provided.					
26.	Internet/ICT is well maintained.					
27.	Microscopes are adequately provided.					
28.	Microscopes are well maintained.					
29.	Projectors are adequately provided.					
30.	Projectors are well maintained.					
31.	Video CD Players are adequately provided.					
32.	Video CD Players are well maintained.					
33.	Audio CD Players are adequately provided.					
34.	Audio CD Players are well maintained.					
35.	Text Books are adequately provided.					
36.	Text Books are well maintained.					
37.	Stationeries are adequately provided.					
38.	Stationeries are well maintained.					
39.	Exercise Books are adequately provided					
40.	Exercise Books are well maintained.					

SECTION D: An Assessment of Availability and Maintenance of Games and Recreational Facilities in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria.

SN	Item Statement	SA	A	U	SD	D
41.	Athletic tracks are adequately provided.					
42.	Athletic tracks are well maintained.					
43.	Stadia are adequately provided.					
44.	Stadia are well maintained.					
45.	Soccer pitches are adequately provided.					
46.	Soccer Pitches are well maintained.					
47.	Basketball courts are adequately provided.					
48.	Basketball courts are well maintained.					
49.	Lawn Tennis courts are adequately provided.					
50.	Lawn Tennis courts are well maintained.					
51.	Gymnasia are adequately provided.					
52.	Gymnasia are well maintained.					
53.	Badminton courts are adequately provided.					
54.	Badminton courts are well maintained.					
55.	Volley ball courts are adequately provided.					
56.	Volley ball courts are well maintained.					
57.	Swimming Pools are adequately provided.					
58.	Swimming pools are well maintained.					
59.	Handball courts are adequately provided					
60.	Handball courts are well maintained.					

SECTION E: An Assessment of Availability and Maintenance of Welfare Facilities in Secondary Schools in Zaria Education Zone, Kaduna State, Nigeria.

SN	Item Statement	SA	A	U	SD	D
61.	School buses are adequately provided.					
62.	School buses are well maintained.					
63.	Accommodations are adequately provided.					
64.	Accommodations are well maintained.					
65.	Pipe Borne water is adequately provided.					
66.	Pipe Borne water facilities are well maintained.					
67.	Electricity is adequately provided.					
68.	Electrical appliances are well maintained.					
69.	Medical facilities are adequately provided.					
70.	Medical facilities are well maintained.					
71.	Toilet/sanitary facilities are adequately provided.					
72.	Toilet/sanitary facilities are well maintained.					
73.	Relaxation centres are adequately provided.					
74.	Relaxation centres are well maintained.					
75.	Staff/student common rooms are adequately provided.					
76.	Staff/student common rooms are well maintained.					
77.	Social centres are adequately provided.					
78.	Social centres are well maintained.					
79.	Training and development of staff are adequately provided					
80.	Training and development of staff are regularly reviewed.					

APPENDIX III:

LIST OF SCHOOLS IN ZARIA EDUCATION ZONE, KADUNA STATE

SN	NAMES OF SCHOOLS
1.	Barewa College, Zaria
2.	Government Secondary School, Tudun Jukun
3.	Government Secondary School, K/Bana
4.	Alhudahuda College, Zaria
5.	Sheikh Ibrahim Arab Special Secondary School, Karan Karan
6.	Government Secondary School, Dinya
7.	Government Secondary School, Dakachi
8.	Government Secondary School, Kugu
9.	Government Secondary School, Yakassai
10.	Government Secondary School, Kufena
11.	Government Commercial College, S/Gari
12.	Government Girls Secondary School, Zaria
13.	Government Secondary School, Likoro
14.	Government Girls Secondary School, Kofar Gayan
15.	Government Secondary School, Gyellesu
16.	Government Secondary School, Awai
17.	Government Secondary School, Zaria
18.	Government Secondary School, Munchia
19.	Government Secondary School, T/Saidu
20.	Government Secondary School, Chindit Barracks
21.	Government Secondary School, Magajiya
22.	Government Secondary School, Aminu
23.	Government Secondary School, Kaura
24.	Government Secondary School, Pada
25.	Government Girls Secondary School, D/Bauchi
26.	Government Girls Secondary School, Chindit Barracks
27.	Government Junior Secondary School, T/Wada
28.	Government Junior Secondary School, Bogari
29.	Government Junior Secondary School, Rimi Doko
30.	Government Junior Secondary School, Manji
31.	Government Junior Secondary School, Kofar Jatan
32.	Government Junior Secondary School, Rimi Kofar Doka
33.	Government Junior Secondary School, Aba
34.	Government Junior Secondary School, Kinkiba
35.	Government Junior Secondary School, Richifa
36.	Government Junior Secondary School, Matari
37.	Government Junior Secondary School, Chikaji
38.	Government Junior Secondary School, Gimbo
39.	Government Junior Secondary School, Zaria
40.	Government Junior Secondary School, Muchia
41.	Government Junior Secondary School, T/Saidu
42.	Government Junior Secondary School, Chindit Barracks
43.	Government Junior Secondary School, Magajiya
44.	Government Girls Junior Secondary School, Pada
45.	Government Girls Junior Secondary School, Chindit Barracks
46.	Government Girls Junior Secondary School, Dogon Bauchi

APPENDIX IV

LIST OF SCHOOLS USED FOR THE RESEARCH

SN	NAMES OF SCHOOLS
1.	Barewa College, Zaria
2.	Alhudahuda College, Zaria
3.	Government Junior Secondary School, T/Saibu
4.	Government Secondary School, Likoro
5.	Government Girls Secondary School, D/Bauchi
6.	Government Junior Secondary School, Mangi
7.	Government Secondary School, Kaura
8.	Government Junior Secondary School, Richifa
9.	Government Secondary School, Yakassai
10.	Government Girls Junior Secondary School, Chindit Barracks
11.	Government Commercial College, S/Gari
12.	Government Secondary School, Gimba, Kudan