EVALUATION OF AVAILABILITY AND MAINTENANCE OF FACILITIES IN TERTIARY EDUCATIONAL INSTITUTIONS IN KADUNA STATE, NIGERIA

BY

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M.Ed/EDUC/5226/2009-2010

**BEING A THESIS SUBMITED FOR EXTERNAL DEFENCE
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF EDUCATION DEGREE (M.ED) IN DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND CURRICULUM, FACULTY OF EDUCATION AHMADU BELLO UNIVERSITY, ZARIA**

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DECLARATION

I hereby declare that, this thesis on Evaluation of Availability and Maintenance of Facilities in Tertiary Institutions in Kaduna State was written and submitted by me. The research was exclusively based on the report of the investigation conducted by me. All sources of information derived from the literature have been duly acknowledged in the text and by way of references. It has not been presented in any previous application for higher degree or diploma at any place.

…… ……

MUSA MUHAMMAD IBRAHIM DATE

DEDICATION

I dedicate this work to my parents Mal. Ibrahim Muhammad Bello, and Malama Rukayyatu Muhammad Sani, and entire masses.

CERTIFICATION

This thesis titled: “Evaluation of Availability and Maintenance of Facilities in Tertiary Institutions in Kaduna State” by Musa Muhammad Ibrahim has been read and approved as meeting the requirement for the award of Masters Degree in Educational Administration and Planning of the Ahmadu Bello University, and is approved for its contribution to knowledge and literacy presentation.

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ABSTRACT

The study was on the, "Evaluation of availability and Maintenance of Facilities in Tertiary Institutions in Kaduna State". The study was set to examine the availability and maintenance of learning facilities, teaching facilities, welfare facilities, and sport facilities, among others. Research question such as what are the available learning facilities and their status of maintenance in tertiary institutions in Kaduna state, what are the available welfare service facilities and their status of maintenance in the tertiary institutions in Kaduna state were drawn respectively. The research design used was the survey method; the population of the study was 57967 and member of population made up of administrative staff, staff [academic staff and non academic staff] and students. The sample comprised of 339, instrument employed to gather relevant data was a questionnaire designed by the researcher. Simple descriptive statistical method of analysis was used to analysis data collected. To give the general description of the data frequency tables and simple percentages were used. Six hypotheses were formulated and tested using Analysis of variance (ANOVA). The main findings of the study revealed that some of the facilities were inadequate, while some are not available at all; the ones available were not maintained and were only used occasionally. It was basically revealed that what was indicated as available by the respondents were mainly dilapidated structures and not maintained facilities. In view of the above it was recommended that Government should form committees for the renovation of structures and facilities in Tertiary Institutions in Kaduna State, government should increase funds in annual estimate and budgets separate from normal allocation. Management staff of institution should imbibe culture of proper maintenance of institutions facilities. Monitoring team should be formed which should comprise management staff, academic staff, non academic staff and students for maintenance of facilities in the institutions.

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OPERATIONAL DEFINITION OF TERMS

The following terms defined were found to be relevant to the study:

Evaluation: An evaluation is a process of gathering valid information in attainment of educational objectives, analyzing and fashioning information to help judgment on the effectiveness educational programme.

Maintenance: In the context of this work, maintenance means any work (such as repairs, servicing and correcting), carried out on any component of the educational facilities with a view to keeping it in, or restoring it too, optimum working condition.

Availability: In the context of the work it means what are on ground so far or what you find out on ground.

School Facilities: This refers to those fixed and unmovable materials, such as building, field, classes etc.

Learning Facilities: These are material use in terms of learning activities such as table, chairs, books, white and black boards etc.

Teaching Facilities: This refers to materials used in teaching activities such as laboratory, workshops, public address system, projectors, and tape recorders in helping teaching activities to become easy.

Welfare Facilities: These are materials use to provide for staff and students for their general well being such as staff toilet and students, water, electricity, security etc.

Sport Facilities: These are recreational facilities that help students and staff for extra-curricular activities such as football, basket ball, table tennis etc.

Health Facilities: In this context are those facilities that help the general health well-being of staff and students. These can be first aid boxes, refuse places, blood transfusion services, ambulance etc.

Infrastructural Facilities: This refers to the buildings and the entire equipment that would be used to help teaching and learning to be easy. Example, lecture hall, accommodation, staff quarter's apparatus etc.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The quality of education delivered by teachers or academic and the academic achievements of students of any tertiary institutions depend on several factors of which institutions facilities are paramount. Tertiary institutions facilities are material resources that enhance teaching and learning process thereby making the process meaningful and purposeful. Institutions facilities can be defined as the entire institutions plant which institutions administrators, academic staff and non-academic staff, students hardness, allocate and utilize for the smooth and efficient maintenance of any educational institutions, for the main objective of bringing about effective and purposeful teaching and learning experience.

According to Adeboyeje (2000) and Ematarom (2004), institution facilities are the physical and spatial production of academic result. Institution facilities serve as pillars of support for effective teaching and learning. Oyesola[2000] sees tertiary institutions facilities to include permanent and semi-permanent structures such as machinery, laboratory equipment, the blackboard, teachers tools, e-book library, funiture and library still pictures, chairs, tables, projectors, computers, games, sporting facilities, lecture halls, accommodations, and other equipment as well as consumables.

Good quality and standard of an institution depends largely on the availability and adequacy, utilization and maintenance of educational facilities. Aleinsolu (2004) asserted that educational curriculum cannot be sound and well operated with poor and badly managed institution facilities. These facilities include blocks classroom or lecture halls, laboratories, workshops, libraries, equipment, consumables, electricity, water, visual and audio-visual aids, tables, desks, chairs, play ground, storage space and toilets.

In Nigeria, tertiary institutions enrolment has continued to increase without a corresponding increase in funding of education for proper development and maintenance of facilities.

Olagbore (1998) sees institutions plant maintenance as any work carried out in any component of the plant with a view to keeping it at good working condition. According to Hinum (1999) the quality and durability of servicing, repairs and the rate at which the needs and requirement change. Institution facilities maintenance involves keeping records of the facilities, supervising and planning for them motivating students and staff to participate in their maintenance and evaluating their availability.

Chan (1979) found that students who were taught in modernized building scored consistently higher across a range of standardized test. Adeboyeje (2000) reported that institutions with well coordinated plant planning and maintenance practices recorded better students' performance. Bucket and Brower's (1957) reported that students in newer and adequate school facilities, out performed students in older and inadequate institution facilities. Good conditions of institutions' physical environment could enhance students' school attendance involvement in academic activities as well as good academic performance. The existence and proper management of organization rests on the available human and material resources. The availability of resources is never the end for goal attainment; this must be marched with maintenance and day-to-day upgrading. Availability of resources indicates strength and productivity of institution. In other words, institution with large membership all things being equal will be more productive than, the one with low resource (both human and material).

In a school system, succeess can only be recorded in a situation whereby resources are available in commensurate measures with students population. A school that has available resources, teaching and learning shall be easy for both teachers and students. At

the end, the school's result shall be good, which is the aim of any educational system. In the aspect of maintenance for a successful school, maintenance implies people usage of equipment and their day-to-day upgrade. It also includes avoidance of over-work and inadequate service in the case of machines.

In school, maintenance of facilities does not only stop at derivable benefit by staff and students but also on the life-span of the equipment. An equipment or instrument that is well maintained shall take more time being used than those not maintained. Facilities such as buildings offices, hostels, stores, staff quarters to mention but a few, can have long life-span when not over worked and not misused.

Maintenance and provision of facilities could help in hazard reduction among students and staff in schools. Cases have shown students becoming unhealthy due to inadequate toilet provision and maintenance. Therefore, one can claim that good maintenance of facilities could improve money saving of an institution.

Many scholars, researcher, administrators, and educational planners, have confirmed that institution facilities in Nigerian school are inadequate and the few available ones are being over utilized due to the astronomical increase in school enrolment. Similarly, Owuamanam (2005) noted that inadequacy of infrastructural facilities and lack of maintenance for the available facilities was the major problems facing our educational institutions in Kaduna State and in Nigeria at large. The tertiary institution facilities are grossly inadequate to match the student population and the availability and maintenance of school facilities will enhance teaching and learning and improve academic performance of students more also encourage staff to work tirelessness.

Researchers like Wilcockson (1994), Lawal (1996), Ajayi (1999) and Owoeye (2000) have long identified the importance of school facilities in teaching and learning while noting that inadequacy, deterioration and lack of maintenance of these facilities will spell

doom for the researcher and students in the teaching and learning activities. Negligence in the maintenance of school facilities has many negative consequences. When school facilities are not well managed and maintained, they can constitute health hazard to students and staff that use the facilities and the even large amount of money invested on the school facilities can be wasted without maintenance.

The researcher observed that tertiary institution facilities in Kaduna state were not maintenance by institutions administrators and hence their life-span depreciated faster. The administrators appear to spend much time on instructional planning, curriculum development, personnel management and community relations claiming that the management and maintenance of institution facilities is the sole preserves of the government. This research evaluated the availability and maintenance of facilities in tertiary institutions in Kaduna state, Nigeria with focus on the state of the facilities, of the maintenance provided, factors encouraging institution facilities depreciation and the roles of personnel in the maintenance of institution facilities.

1.2 Statement of the Problem

Almost all institutions of higher learning are bedeviled with several problems/challenges. These problems range and covered all ramifications. One might say that these problems are the causes of inability of tertiary institutions to achieve their goals and also compete in the global scientific and technological advancements. A careful study or observation reveals to an observer, outdated equipment, and dilapidated structure over stretched materials and over use of gadget and machines. All these factors could be related to issues such as underfunding, corruption, inadequate maintenance culture, polarization of education, non-challant attitude to work, favoritisms, god-fatherism and many more reasons beyond explanation.Arizika, M. (200).

The primary objective of tertiary institutions is to provide high-level manpower that will man sectors of development of this country. One wonders and asks no question the deplorable nature of all sectors in Nigeria. The answer is the power house is sick (education) as such all other sectors most without argument be affected in one way or the other.

In institution of higher learning today students are congested, some standing due to inadequate chairs and desks, others standing by the windows due to inadequate facilities and over population in classes. This result to low or academic performance among students, thereby resulting to examination malpractices, teachers friend girl students and bribe collection from boys students for passing examination. At the end of it all, after graduation students cannot defend their acclaimed certificate ozigi,A O (1977).

In addition, the areas of teaching facilities are also in acute shortage. Libraries are full of outdated books, ICT equipment in some schools are never available, PHCN power absent and no generating power plant for students to study at night. This trend pushed healthy parents to take their wards abroad for better schooling. Sunusi (2011) lamented that Nigerians spent over the budget of all Nigerian universities abroad on school fees, accommodation and flight ticket. This creates a situation whereby class society is formed with a lot of tension which increases crime as a result of unemployment.

Other challenges/problems include inadequate hostel accommodation to students. Most schools cannot accommodate 50% of students. The case is also similarly on the part of staff accommodations. This directly affects staff and students performance. Loan to staff for housing and vehicle are either low or not in existence at all. In the case of institutions where students' hostels and staff quarters exist, the maintenance culture was poor. This poor maintenance results spread of diseases and other illnesses. In the event of illness most clinics lack adequate drugs and specialists to attend to staff and students?

In recent time back, the result of some of these identified problems manifested in Kaduna state. Daily Trust (2013) reported that 1,300 failed primary four tests. This indicates the effects of inadequacies that exist in schools in the areas of training, facilities provision and maintenance, which depend on funding of education in Nigeria.

1.3 Objectives of the Study

The study intends to achieve the following objectives to:

1. Examine the availability and maintenance of learning facilities in tertiary institutions in Kaduna State.
2. Assess the availability and maintenance of teaching facilities in tertiary institutions in Kaduna State.
3. Determine the availability and maintenance of welfare services facilities in tertiary institutions in Kaduna State.
4. Assess the availability and maintenance of sport facilities in tertiary institutions in Kaduna State.
5. Examine the availability and maintenance of health facilities in tertiary institutions in Kaduna State.
6. Identify the availability and maintenance of infrastructural learning facilities in tertiary institutions in Kaduna State.

1.4 Research Questions

1. What are the available learning facilities and their status of maintenance in tertiary institutions in Kaduna state?
2. What are the available teaching facilities and their status of maintenance in tertiary institutions in Kaduna state?
3. What are the available welfare service facilities and their maintenance in tertiary institutions in Kaduna state?

4. What are the available sport facilities and maintenance in tertiary institutions in Kaduna state?
5. What are the available health facilities and maintenance in tertiary institutions in Kaduna state?
6. What are the available infrastructural facilities and maintenance of tertiary institutions in Kaduna state?

1.5 Research Hypotheses

The following null hypotheses were postulated for the study:

1. There is no significant difference in the opinions of staff and students on the availability and maintenance of learning facilities in tertiary institutions in Kaduna state.
2. There is no significant difference in the opinions of staff and students on the availability and maintenance of teaching facilities in tertiary institutions in Kaduna state.
3. There is no significant difference in the opinions of staff students on the availability and maintenance of welfare services facilities in tertiary institutions in Kaduna state.
4. There is no significant difference in the opinions of staff and students on the availability and maintenance of sport facilities in tertiary institutions in Kaduna state.
5. There is no significant difference in the opinions of staff and students on the availability and maintenance of health facilities in tertiary institutions in Kaduna state.
6. There is no significant difference in the opinions of staff and students on the availability and maintenance of infrastructural learning facilities in tertiary institutions in Kaduna state.

1.6 **Basic Assumptions**

The study postulated the following as basic assumptions:

1.1 That when available and well maintained learning facilities are provided in tertiary institution, there will be good academic performance and rise in standard.

1.2 That availability and maintenance of teaching facilities create a conducive environment for teaching and learning.

1.3 That availability and maintenance of welfare service facilities promote high performance of students and staff in tertiary institutions in Kaduna state.

1.4 That availability and maintenance of sport facilities in tertiary institutions promote friendly relationship among staff and students.

1.5 That availability and maintenance of health facilities boost staff and student morale for effective teaching and learning.

1.6 That availability and maintenance of infrastructural facilities create good atmospheric environment for effective teaching and learning.

1.7 Significance of the Study

The study examined the present conditions of availability and maintenance of facilities in tertiary institutions in Kaduna state.

The findings of the study will assist administrators and educational planners in their allocation of funds and resources to tertiary institutions. The findings will also help management staff to be aware of one of the important variables that can influence their administrative duties, as well as staff and students' performances.

It is also hoped that the findings of this research work would contribute to the existing body of knowledge by bringing new ideas and challenges to educational management and administrator. It will benefit the institutions managers to identify their available facilities and plan on how to and maintain them.

The study findings of this would help both staff and students to acknowledge the importance of availability and maintenance of facilities in creating an effective teaching and learning environment. The findings would also help staff to develop meaningful strategies and methods, towards operation and maintenance of school facilities to enhance effective and efficient teaching and learning. The research findings would further help both staff and students appreciate the need to encourage hard work, and learn better through adequate utilization of their potentials and the few resources available. The study would help to appraise the past and present practices of procurement and maintenance of facilities in all tertiary institutions in Kaduna state, with a view to highlighting some of the crucial issues and problems connected therewith.

1.8 Scope of the Study

The study basically intends to cover Ahmadu Bello University (ABU) Zaria, State College of Education Gidan waya, Kaduna Polytechnic, Shehu Idris College of Health Science and Technology Makarfi, in other to evaluate the availability and maintenance of the facilities in the selected tertiary institutions in Kaduna State.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed relevant literature related to availability and maintenance of facilities in schools or tertiary institutions. The review of the literature was considered under the following sub-headings.

2.2 conceptual frameworks

2.3 Theoretical framework

2.4 Availability Maintenance of learning Facilities in school

2.5 Availability Maintenance of Teaching Facilities in school

2.6 Availability Maintenance of Health Facilities in school

2.7 Availability Maintenance of Welfare Facilities in school

2.8 Availability Maintenance of Sport Facilities in school

2.9 Availability Maintenance of Infrastructural Facilities in school

2.10 Constraints to the Availability Maintenance of Facilities in school

2.11 Empirical Studies

2.12 Summary

2.2 Conceptual Framework

Learning Facilities: Afolabi (2002) the learning facilities refers to the site, building, furnitures and equipments that contribute to a positive learning environment and quality of education for all students. The learning facilities available within an educational institutions has positive relationship with the quality of teaching and learning activities which in turn leads to the attainment of goals set. The learning facilities of the school building and furniture will determine how long such will last while comfortable classroom.

Agusiobo (1991) sees teaching facilities as available that use by the instructor to bring out desirable changes in human behavior. This is situation that teacher use the available facilities to modify the behavior of a students for a better living. The total development of the learners in the cognitive, affective and psychomotor domains of teaching and learning can only take place in an environment that is conducive to teaching and learning.

Health Facilities: The mission of school health facilities and services programme in the developed countries is to appraise, protect and promote the health of the staff and students in educational tertiary institutions. Preventive and emergency school based health facilities are provided in accordance with a local school health facilities which is jointly developed by the country's health department, school district and school health advisory committee. School based health facilities are important component of the institutions health system which help to assure that the staff and students are healthy in the classroom and are ready to reached and learned. School health nurses and doctors with the aids of health facilities enhance health within the school and community by providing health appraisals, nursing assessments, nutrition's assessment, providing dental services, periodic health screenings, health counselling referral and follow-up of suspected or confirmed health programs, emergency health service and promoting activities to reduce risk-taking behaviours (Frank, 2007).

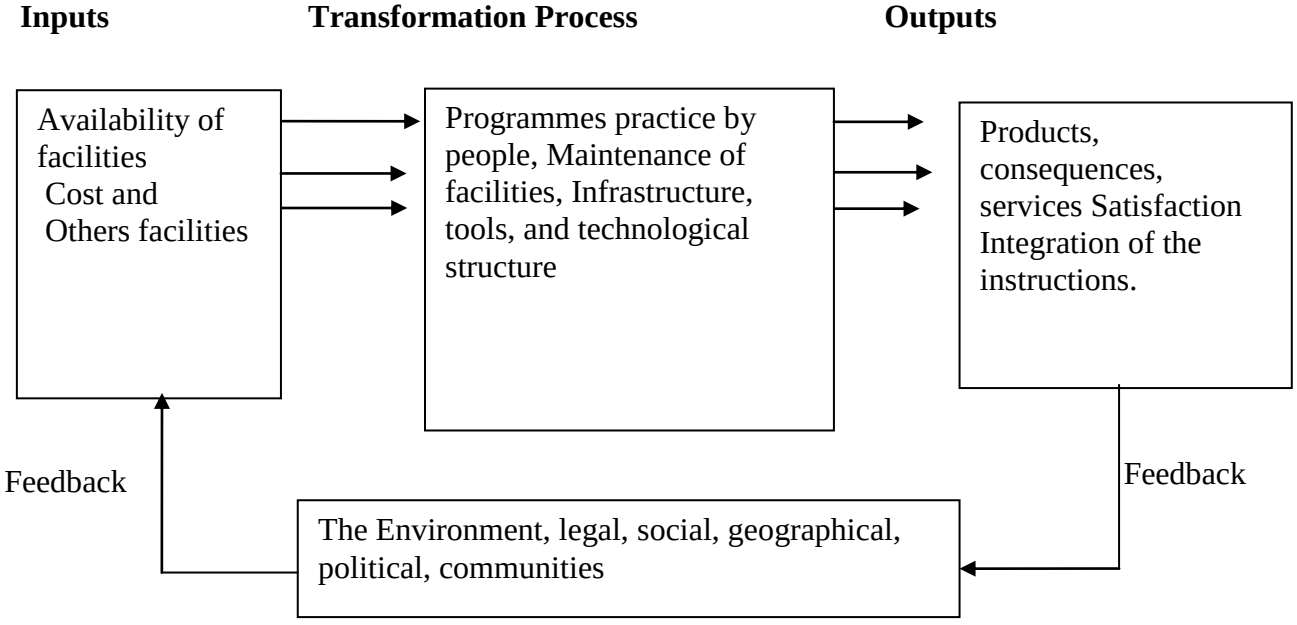
Welfare Service Facilities: welfare facilities are those facilities providing and making them available that are necessary for the well-being of people at work, such as adequate washing, toilet vest and changing facilities, and some where. Clean to site down drinking water, etc. In addition to the provision of welfare services facilities regular maintenance and cleaning of them will be required. Particularly ditty work hazardous to health (Health and Safety in Construction (www.hse.gov.uk/pubns/rais1.pdf).

Sport Facilities: Sport as a concept in tertiary educational institutions is paramount which occupied most of the extra-curricula activities for recreational pleasure and health well-being. Its important to stress that sport facilities is not linked only to the performance and the spirit of high level competition. In educational tertiary institution spirit hold more and more, a social value. The usefulness of sport facilities to staff and students cannot be over emphasized why because. It creates social and friendly relationship within and outside school. Chartered Institution of Building of London (1994).

2.3 Theoretical Framework

The basis of this research work can be traced and related to the system theory. A system is a sum total of parts working independently interdependently to achieve required results or outcomes based on needs, (Ovwigbo, 1991). This implies that, a collection of people, resources, concepts and procedures intended to perform some identifiable function or to achieve a goal. A system is made up of input, transformation process, and output; meanwhile, these are surrounded by an environment. The environment of the system is made up of several elements that lie outside the system. In essence they are not input outputs or processes, but have influence on the goals and thus the operation of the system. Figure 1 explains the details.

Fig. 1: System and its environment

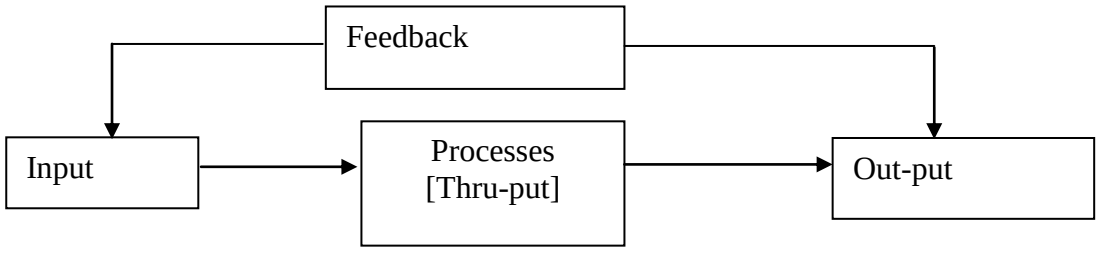


Source:Adopted Ovwigbo (1991)

System is often analyzed in terms of their effectiveness and efficiency. The system effectiveness refers to the extent to which goals are achieved in the territorial institution. Therefore, effectiveness is considered to measure the degree of goals attainment of the institutions of learning. While, efficiency refers to how the activities of an institutions could be conducted to minimize waste of resources for the purpose of attaining the objectives. Efficiency therefore, aims at minimizing cost and measure how well facilities are being utilized for maintenance of available facilities. This is dependent on ratio of output to input.

The system theory considers an institution as a social system which survival depends on the system's ability to maintain the relative consistency of its processes and the relationship within and outside the system's. The ability to maintain the relative consistency of its processes and the relationship within and outside the system. The process involves a model of energetic input-output system with energetic returns. That is to say the outputs reactivate the system. This is illustrated in figure 2.

Figure 2: Input Output System



Source:Adopted Ovwigho (1991)

Figure 2 shows that the inputs into the system are processed within the system and the outputs are obtained. Some of the output are sent to the environment i.e. in the institutions while, others find their way back to constitute further inputs.

The theoretical frame work notes that, evaluating, availability and maintenance of facilities occupies an important position in an institution [especially in tertiary institutions],

This provides and makes for the smooth planning, directing, organizing, staffing and controlling within the institutions. The main aim of evaluation of available facilities and its maintenance is therefore to develop a viable system to minimize the effective use of facilities in the process of teaching and learning. It's also aimed at assisting management staff, staff (Academic and Non-academic staff) and students to operate in order to produce effective and accurate product to the society at large. In additions, it answers the increasing needs of tertiary institutions as it allows staff and students to have access to all relevant institutional facilities which enable them to take active role within and outside community.

2.4 Availability and Maintenance of Learning Facilities in School.

First and famous researcher started with concept of learning that is how learning takes place and in which environment learning supposed to take place? According to Obanya (1980) the usual psychological definition of learning is change, or modification of behavior or responses as a result of some forms of experiences.

To understand the concept of learning from the point of view of the psychologist one needs to examine key words, that is change, which implies that learning is a change of behavior as a different person from one which he was before he went out into it. This change is the intellectual and emotional functioning which is important meaning that the learner now begins to reason in a different ways he sees a problem from a different perspective becomes increasing aware of the complexity of a particular problem and interacts in a more socially acceptable way with other people in his environment.

Therefore, teaching and learning depends on certain things which make students not to face challenges as it relates to students in tertiary institution in Kaduna state. Such challenges are in adequate learning materials, reading materials, books, internet services café, inadequate accommodation availability and inadequate water supply, electricity to mention but a few.

The learning environment as one of the essentials being the most important school clients, also have basic human needs which they desire to satisfied. Thus in one school setting, most students and teachers are sometimes aware that parents and government expect them to perform at the highest level of their motivational needs which are; self respect, prestige recognition, self achievement of personal goals and talents as the best teachers or students.

However students and staffs may be able to attain their higher other needs in the teaching learning processes, when institutions facilities are well managed and maintained, adequately supplied and managed in such a way that staff and student can satisfy their lower level needs of food, drinks, shelter, safety and love. This statement is further supported by Fuller (1987) and Heyneman (1977) they both upheld that better facilities provide more motivational conditions for teaching-learning particularly among the developing countries such as Nigeria and Uganda. Fuller (1987) and heyneman (1977) in a related discussion Edem (1987) reassured that staff and students morale may fall in the absence of inadequate availability and maintenance materials inducement in institutions. It is the more reason why highly motivated teacher or staff and students are considered important resources for academic progress.

System theory also acknowledges the importance of extrinsic factors as important energies for effective teaching and learning. It implies that tertiary institutions facilities should be available and maintained in such a way that they offer a challenging and conducive teaching and learning atmosphere for teachers and student. Thus one needs suitable institutions buildings for protection, institution clinic, tap-water, good cafeteria libraries, books, laboratories, internet café, for effective development of the individual potential within institutional system becomes a necessity.

It is only the availability of these essential instructional and survival facilities that the learners and instructors can then have the positive mind to willingly learn for enjoyment and for development of personal competence.

From the above discussion on motivation, the motivation theorists such as Brune, Herzberg, Maslow and Skinne, share the view that both extrinsic and intrinsic factors do influence effective teaching and learning of teachers and students. Secondly most motivation theorists such as Blair, jones and simpson (1975) maintained that motivation is not something that teacher or school authority can do to the learners or teachers to compel him to perform effectively, but it is the release of the energizing force within the learner that willingly forces him towards a personal goals. Nevertheless they do assure that motivation is an intrinsic force, drive, motives within the individual that compels him towards attainment of personal goals. Thus the task left for the institution management is how to design and maintained the availability of facilities in such a way that they will stimulate the extrinsic and intrinsic motivation of the individual teacher and student.

2.3.1 Educational Adequacy for Learning Space

Learning area is very important for consideration of teaching and learning before learning or modification or change of behaviors to take place. There is need to specify an area that would be suitable for effective learning situation this is called, academic learning areas, for instance from any disturbances and noisy areas which required thus:

(a) Size of academic learning areas should meet minimum standard specification;

(b) Learning areas should be conveniently located near related educational activities;

(c) Academic learning areas should be situated away from noisy areas such as dining halls;

(d) Design of learning areas should be compatible with instructional needs, teachers, and students interests.Umar (1998)

After when, above factors been considered in providing and maintaining suitable learning facilities the next thing is to considered thus:

2.3.2 Special Learning area or Facilities

(a) Special learning facilities such as libraries, laboratories, workshops, and other laboratories that are needed should meet minimum standard by size;

(b) Gymnasium, athletic fields, and auxiliary facilities should adequately serve the needs of the learners or students.

(c) Libraries, resources, centre should be available appropriate and attractive space for reading and research etc.

(d) Science and technology laboratories should be available sufficient space for group instruction, individual experiments and adequate locked storage.

(e) Facilities for art should be sufficient to accommodate the program and equipment;

(f) Storage for teaching staff and non-teaching staff materials in special learning facility areas should be adequate too;

(g) Design of learning facilities and instructional materials should be compatible with instructional needs or educational specification;

(h) Vocational programs such as Home management, Carpentry, workshops facilities should be housed in spaced that meets standard.Sheingold, (1992).

2.3.3 The use of Books in School

Good learning facilities are those that make it possible for students to use books through which they can learn more effectively. Brown (1982) regarded textbooks, as the

required books used by the entire class in studying a particular course or subject. He said that it does not imply that all learning activities should be geared toward teaching the contents of the book, or that it should form the sole basis for organizing the day to day teaching. Instead, it should be regarded only as one of the several useful materials that will aid in making lessons more exciting and interesting.

He further emphasized the functions of books as facilities of learning. He said that books save valuable time for teachers and students, for instance, most textbooks, are prepared to cover a stated syllabus. A review of the chapter organizations of different textbooks available will be of great assistance to the teachers and students in determining what unit or topic to include in his subject as well as the best or the most logical sequence they should follow. Furthermore, he said that books provide the necessary basic knowledge of particular subjects; textbooks provide a common experience for the class. He also said that they were readily available for students to read and update the experience and knowledge in the end he concluded by saying that textbooks ensure continuity of learning in case a class has a change of teacher. Books consist of textbooks, library book and stationary.

It is an accepted fact that books generally and textbooks in particular are major sources of imparting and acquiring knowledge throughout the world. Learners like the post secondary students are supposed to read relevant textbooks and other useful publications in order to broaden their minds and develop their intellectual Ogedele (1998) noted that the achievement of the overall goals and objectives of education in Nigeria revolve around the ability of the learners to tap the various opportunities offered by the school and its environment. One of the opportunities offered by school plant facilities such as library and books cannot be over-emphasized. This perhaps is the reason why Nwagwa (1979) and Adesina (1990) argued that the quality and quantity of the educational facilities available

within an educational system have positive relationship within the standard and quality of that educational system.

2.3.4 Availability and Maintenance of Information Communication Technology (ICT) in School

The concept of information, communication and technology, is defined as "knowledge acquired or supplied about something or somebody" (Encarta Encyclopedai, 2007). Rapaport (1953) defined information as "anything that adds to existing knowledge" it means information must have value and people must be prepared for such services. Wali (1992) cited by Edoka and Dike (2000) that information communication and technology can be equitable with any national economic resources. He viewed "information as a necessary tool for planning, policy formulation and decision-making in all system of national development". The view of these scholars could be said to have identified information as facts, or knowledge, put together to promote human resourcefulness socially, economically scientifically and technologically.

Lucy (1998), defined it as acquisition, processing, storage and dissemination of vocal, pictorial textual and numeric information by a micro electronic based combination of computing and telecommunications", where as Onanogbo (1990) noted that "it is a new revolution which has penetrated almost all fields of human activity thus transforming our economic and social life".

Information communication and technology (ICT) as explained by Madu and Adeniran (2000) are made up of low and high technology. The low technologies includes tools and machines e.g typewriters, offsets, printing machines, microfilm readers, projectors, staplers, paper cutters, library catalogues, radio and television etc. The high technology

includes micro electronics, telecommunication and computers etc. The difference between the two is that while the low technology only aids production of projects information, the high technology, carries information which can be manipulated, retrieved and or exchanged. It is also possible to interact with the high technologies.

From the above definitions it means that the concept of information communication and technology (ICT) could be put together to mean the new media tools applied to information services delivery which encompasses to collect organize, retrieve disseminate and perverse information. It is generally agreed that information is the communication of knowledge, ideas, values and traditions, information and communication thus serves as the power to help individual and the society achieve greater access to knowledge and ideas. It is also a new, faster and better method of teaching and learning.

The primary and traditional roles of tertiary institutions in general are the transmission of knowledge and the training of minds. Another unique role of universities is to engage in basic research that could lead to the advancement of knowledge and economy (Alo, 1995; Bako, 2005). Through research and its results, universities and other tertiary institutions are expected to contribute to the improvement of the quality of life and to social and technological change (Alo, 1995).

Information communication and technology is transforming the way in which research is conducted. Researchers and students in developed countries are now able to devise their own strategies, manipulate information in a new way, and study issues which previously would have been difficult to address owing to the variety of the data. They now have access to a variety of sources that they can manipulate, share and discuss with their colleagues all over the world through the use of information communication technology (ICT), (Sangowusi, 2003). However, according to Agyeman's survey (2007) in Ibrahim (2008) some tertiary institutions such as universities have made giant strides in campus-wide

area networking and e-learning courses deliveries. For example, the Obafemi Awolowo University (OAU) boasts of having the best-developed ICT system in the country with its own VSAT access to the internet and campus-wide internet. The Nnamdi Azikwe University, has achieved a better radio for P.C – to students radio. Universities like IBB, Maiduguri, Bayero, and Katsina state, Usman Danfodio and University of Jos. All these northern institutions have developed e-learning programmes for several departments and several colleges and polytechnics and striving to sue ICT in learning, teaching and research.

Some universities offer degree programmes via the internet, in Nigeria the National Open University of Nigeria [NOUN] is an example. Learners can study where and when they have time.ICT facilities the development of huge libraries the [web] that can be accessed by large numbers of people. It makes knowledge to be shared within a short time disregarding the distance across fertilization of teaching materials and methods are possible. Below is a list of different types of audio visual aids that can be used to maximize learning outcomes. Overhead projector, television, UCR, video projector, digital cameras, world wide web, slide projector, film strip projector, simulators, graphical interfaces, electronic board, computer, one or two way video, CD player, satellites, internet local area network [LAN] interactive television, digital camera. Encarta Encyclopedia (2007).

The following are among the three recent and common ICT, web based teaching and learning platform. Blackboard.

[Http//www blackboard.com], desired learn. [http//www.//www vebct.com] and webct [httpt;//wwwebct.com].All these solutions severe as based and allow access through a web browser to provide e-learning solutions through the web. All have the capacity to;

a. Provide courses materials

b. Manage enrolment and registration

c. Develop evaluation materials, such as quizzes test or assignments.

d. Communicate with instructors and students online through an announcement section, discussion on board, e-mail, real time chat session or classrooms, and an interactive white board.

e. Take and save notes about course

f. Manage grades and provide the grades with the students.

g. Present important dates through a calendar tools.

h. Provide links to related web sites. Encarta Encyclopedia (2007)

In another development Alten [2006] observeb that information communication technology helps to;

a. Direct class teaching: when a board cast programming substituted for teachers on temporary basis

b. School broadcasting where board programming provides complementary teaching and learning resources, not otherwise available.

c. General educational programming over community, national and international stations, which provide general educational programme [Hassan and chindo 2008]

Skill knowledge of students are widen by the use of ICT, students are able to read and print.Out expects, authors and educationalists. Submission through browsing, many students are able to write their topics research questions and literature review through browsing.

2.3.5 Problems Militating Against of Availability and Maintenance of Information Communication and Technology in School in Nigeria.

ICT has been described as an effective tool for learning facilities in school general, therefore there is a lot of problems which deprive the institutions from benefiting from it, thus, lack of good maintenance, poor storage, and other ones which are as include:

Power supply has been a great challenges which has devastated so many aspects of development in tertiary institutions; ICT is well available but cannot be used for effective

teaching and learning moreover for administrative and educational purposes which indicate that ICT undergoing a lot of difficulties. Due to lack of constant power supply no one can uauch for the safety of computers, hardware because of power failures and fluctuations. The cyber cafees that use generators for their operations charge exorbitantly and are not always at service due to one thing or the other. This has made it impossible for the tertiary institutions students and lecturers to publish and contribute through on line like others developed institutions.

Secondly, problems which hinder the development of ICT in tertiary institution in Kaduna state is shortage of human resources which limit the effectiveness of ICT for teaching and learning in our schools. There is lost of personnel or experts to develop course materials or wares that are needed. There are not enough operators that can involve in the training of people for spreading the knowledge for general benefit of staff and students.

Another problem for the maintenances of ICT in our institutions or school are environmental factors. They make use of computer which are sensitive to heart, but, humanity, vibration and mechanical shock. The environmental hazards in Nigeria and north in particular include heat, dust, and computer is exposed to virus and breakdown easily which discourage people that are into internet business. Last but not the least poor funding of education in Nigeria; makes ICT facilities out of reach of many institutions, students and lectures. Some institutions that wish to have ICT centre are unable to do so because of the cost of establishment. And those that are able to establish it cannot maintain it, students and lecturers do not have easy accessibility to ICT service (Arzika, 2000).

2.5 Availability and Maintenance of Teaching Facilities in School

According to Olaitan and Agusiobo (1991), teaching can be defined a on attempt to bring out desirable changes in human learning, activities and behaviour. The aim of teaching

therefore, is to influence learners to make those desirable changes in their behaviour that contribute to better living. These changes include:

(a) Can increase and store useful information and the understanding of basic principles in the subject matter

(b) Acquisition of skills abilities and habits for instance, psychomotor skills, the physical competence required to perform certain activities efficiently.

(c) Possession of desirable attitude and ideas, such as developing satisfaction about learning outcome or achievements obtained through the process of sharing meaning. Rapaport (1995)

According to Bello (1981) teaching involves activities in which the learners participate so that they can understand the process and learn.

Instructional materials or facilities are easily identified with direct teaching functions. They serve essentially as centres for learning and teaching in the school set up. Enaohwo and Efferetteya (1988:15) defined instructional facilities as "a systematic way of designing, carrying out and evaluating the total process of learning and teaching interms of specific, objective to bring about more effective learning". Good learning situation are those that make it possible for students to use materials or facilities through which they can learn more effectively, teaching facilities in terms of textbooks, teaching aids and equipment are essential to effective teaching-learning.

The lists of teaching facilities that teachers can use are inexhaustible. The teacher's level of resourcefulness, creativity and imagination is, infact, not limited. Teaching facilities will, therefore, include all forms of information that can be used to promote and encourage effective teaching-learning activities. These are textbooks, suppetnary books, workbooks, reference books, charts, magazines, maps, journals, periodicals, pamphlets, newspapers, posters, programmed texts and non-printed materials like; film, filmstrips models, mock-up,

slides, pictures, audio and videotapes, records, transparent, globes, board and a host of others. There are also the range of teaching facilities such as sciences apparatuses and chemicals (National Education Research Center, 1982).

Gidado (1990:31) made reference to a study carried out in Kano on secondary (grammar) school administration revealed that most of the schools were devoid of necessary facilities among which are the teaching facilities. Textbooks in form of teacher's guide and students' texts, for example, are indispensable facilities in the school system. Although a good and experienced teacher works successfully without a text, his tasks are made difficult as he is expected to sue his initiative and creativity in planning his lessons. Teaching facilities are required for the various activities of the school program as well as for the extra-curricular activities. To meet these requirements of the schools, the National Policy on Education (2004: Section 3 Paragraphs) has mentioned government commitment to "ensure that all schools are properly equipped to provide sound and effective teaching --- (and is) embarking on a scheme for the provision of inexpensive textbooks". This is not an easy task and therefore the federal government was to make a provision of setting up of a National Committee to advice on the federation (NCAF, 1981, Section 3, Paragraph 6). The National Policy on Education was first published in 1977 and reprinted in 1981, 1998. The fourth and recent edition was printed in the year 2004.

Since inception, it cannot be said that government has not done so much everything. This indicated is in the National Policy on Education. However, a little effort has been made by government to implement other policies in the National Policy on Education, such as the open learning system, which is the informal system which has been incorporated into the formal system of learning; nomadic education, special education such as centre of the disabled alongside with government at federal and state level has been implemented.

However, on the issue of the facilities, it has only been partially provided in some schools, but nothing has been done as stated in the policy in the area of implementation in tertiary institution in the state.

Science apparatus and chemicals; and finally, the third section include the various science apparatus and chemical. Blunt et al (1968) also presented for categories of resources and facilities which are used for teaching and learning. These are:

(i) Reading materials

(ii) Audio-visual materials

(iii) Demonstration and experimentation materials

(iv) School community resources including personnel.

Thus, most of the authorities cited above, have given ideas that can help us to understand the embracing nature and the potency of the concept of teaching facilities in school, for effective teaching and learning.

2.5.1 Uses of Teaching Facilities

Results from various research studies have shown that teaching facilities are facilitators of teaching learning activities when properly used (Blount and Klausmeirer 1968). According to Agun (1982), teaching facilities are designed, produced, and used for the following reasons:

(i) The achievement of specific curriculum objectives textbooks and supplementary facilities

(ii) To encourage and promote self instruction i.e programmed learning package

(iii) For enrichment of learning

(iv) To aid teachers' presentation of the learning task

(v) To arouse interest and motivate learners. Most of his ideas about the uses of teaching facilities are in agreement with the principles of learning and motivation theorists discussed earlier in the theoretical framework.

Moreover, Alcon (1970) also enumerated fourteen uses or benefits of a wise use of various teaching facilities. These are listed below:

1. They provide for a direct interaction of students with the realities of their social and physical environment.
2. They promote greater acquisition and longer retention of factual knowledge.
3. They provide objectivity for the study of a delicate
4. They provide increased, interest in learning
5. They stimulate interest of voluntary reading
6. They allow all members of a group the opportunity to share a joint experience
7. They get and hold attention
8. They reinforce verbal message
9. They bring experts and variety of resources to the classroom
10. They provide for a direct interaction of students with the relatives of their social and physical environment
11. They provide integrated experiences that vary from concrete to abstract
12. They are valuable for all age and ability groups
13. They facilitate attitudes and behaviour changes
14. They illustrate and clarify nonverbal symbols and images quantitative relationship, complex relationship, abstract concepts, spatial relations and specify details.

The uses and benefits of teaching facilities enumerated above clearly direct one to Knezevich's (1969) statement that the administrative leadership carried the responsibilities for obtaining and allocating teaching facilities necessary to promote educational programme

development. It is therefore, the duties of federal and state movement, Ministry of officials' school administrators to endeavour to produce, select and distribute a variety of teaching facilities to all tertiary institutions in the state, in order to ensure teachers and students' resourcefulness, creativity, and imaginative use of these facilities. This may be one way for ensuring effective teaching and learning at the tertiary institutions level as well as to facilitating the achievement of the tertiary institutions goals and curriculum objectives

2.5.2 Selection and Production of Teaching Facilities

Available, selection and production of teaching facilities as used in this study, refers to rationale decision making processes reflecting the relationship between the curriculum, methods, teaching facilities, national and state educational objectives and the school physical facilities. In other words, the meaning stresses the need to envisage the type of teaching facilities, method, and school physical plant that will facilities the attainment of tertiary institutions curriculum; and its two national objectives which are preparation for:

(i) Useful living within the society; and

(ii) Higher education (National Policy on Education–revised, 1981).

The concept of teaching facilities availability, selection, and production cited above has further made us understand the need for ministry officials, educational authorities to adequately provide funds for teaching facilities for effective use and storage of teaching facilities, in order to facilitate quality teaching. This may be one of the reasons why, it is often stressed that teaching facilities is an integral part of educational objectives (Agun, 1982; and Castaldi, 1977).

Thus, teaching facilities availability, selection and production is appropriately done at two levels by curriculum developers and teachers in order to ensure quality teaching and learning. The first level according to Agun (1982) is the curriculum development level. At this level rationale and systematic analysis about the ranges and variety of teaching facilities and methods, to be used for effective teaching are made. Agun (1982) went on to emphasize that at this level the main concern is to establish a relationship between the specification of curriculum objectives and content, and the teaching facilities to facilitate achievement of stated national and state educational objective. (Agun, 1982), went on to state that the second level is known as the curriculum implementation level. At this level teachers who are

the basic key implementers of the curriculum are being encouraged to acquire basic skills in providing, designing and producing simple effective teaching facilities.

Agun (1982) emphasized the need to train and re-train teachers in the identification, selection of essential teaching facilities in order to make teachers more committed to the appropriate use of the variety of teaching facilities and methods prescribed by the curriculum developers at the first level. Agun's view that teacher need to be trained in the selection, production and utilization of teaching facilities exposes one to one of the variable that prevent some curriculum intonations from being achieved. His point of view further creates awareness in one about the importance of educating teachers in skills, and knowledge for adequate utilization of teaching facilities and method specifies by the curriculum developers.

2.5.3 Steps in the Production of Teaching Facilities

Steps for controlling production of teaching facilities for each level of education are necessity. Agun (1982) enumerated very useful guidelines or criteria for the production of teaching facilities. These are to:

1. Select specific teaching objectives that relate to the overall curriculum objectives to ensure effective utilization of teaching facilities in education.
2. After the selection of learning objectives, the producer must identify characteristics of the learners for when the facilities will be used. This criteria helps the producer to acquire vital information about the need, interest, background, experiences, teaching strength and weaknesses of the learners, to guide the producer in designing the type of teaching facilities and methods that will be suitable for effective teaching.
3. Selection the content of the message that the facilities will carry content should relate to the identified objectives.
4. Select the medium for presenting the message

5. Determine the cost for producing facilities like textbooks, workshops, programmed texts, teacher manual and film.
6. Design and develop the facilities in the interest of students and the overall curriculum and teaching objectives.
7. Produce the facilities observing the rule of clearity, legibility, simplicity, accuracy, durability portability or manageability.
8. Test the facilities for effectiveness with simple population.

2.5.4 Availability and Maintenance of Teaching Facilities Production and Storage

In defence of the uses of teaching facilities listed above, Brown (1959) pointed out that these uses have enlightened one about their functions as the most basic substance of many experiences which both students and teachers undergo in the classroom. This may be of the reason why Knezevich (1969), Mybodile (1986) and Ozigi (1977) emphasized that the educational authorities and school administrators carry the responsibility for the selection, production, distribution, and storage of teaching facilities for school. According to Agun (1982), for meaningful and effective production of teaching facilities, it is essential that facilities, materials, and equipment are available. He went on to stress that available and maintained facilities should include recorded materials to be listened to, film to be viewed, and for the demonstration and storage of such facilities. He pointed out that adequate space allocation is necessary for workshops and in-service training of teachers, school inspectors and other school officials.

Available facilities for maintenance production and storage can be established at the curriculum development and implementation levels. This according to Agun (1982) is to ensure adequate maintainace, production and utilization of teaching facilities for the attainment of the curriculum objectives. Educational resource centre should provide useful facilities for the production of teaching facilities.

Agun (1982) further stated that the establishment of adequately equipped resource centres may provide the essential facilities to encourage the production, and use of teaching materials by both teachers and learners. Other facilities for production of teaching facilities are teacher's centre.

In educating and analyzing the view of Agun (1982) Brown (1959) maintained those resource centres are places where variety of educational facilities and equipment are stored for adequate use and effective teaching and learning by both teachers and learners.

2.6 Availability and Maintenance of Health Facilities in Schools

Meaning of health: Health is termed to be an umbrella that sumamrises the condition in which an individual is said to be emotionally stable, mentally alert and socially well-adjusted to himself and his fellowmen (Nwanachukwu, 2000).

In order to fulfil these broad expectations, the school system has put in place some planned facilities referred to as school health facilities. The World Health Organization (WHO, 1974) however, knows much better hence health was declared as "a state of complete physical, mental and social well-being of an individual and it is not the absence of disease or infirmity". Unfortunately, out of ignorance many people do not know the attributes of good health let along knowing how to acquire them. This is where the school health facilities have to come into play. The school provides all the learning experiences that positively influence the knowledge attitude and practices (KAP) of individuals on health matters.

Consequent upon this however, the concept of health has changed with time and social conditions. Health is described as the quality of life that enables individuals to live longest and serve best. Anderson (1976), defined health as "the quality of physical,

emotional and mental well-being which enables one to live effectively and enjoyable". Health is described as a state in which all the body organs, heart, kidneys, liver, brain etc are functioning properly and supporting each other.

Moreover, Itochbaum (1980), viewed health as a state of being well sound or whole in mind, body or soul, well-being especially the state of begin free from physical disease or pain. Health is not an absence of disease, but the ability to function effectively within a given environment (Shiffers 1980). By implication, the health of the school, students and staff is generally considered more than the absence of a minor illness; it is however, a reflection of the students and staff stability to maintain stable emotional status and also to co-exist with other people in an environment. According to Shiffers (1997) "health is something positive, joyful responsibilities which life places upon us.

2.5.1 The Concept of School Health Facilities

School health facilities provided for the promotion of positive health status of school staff and students in a learning environment Mohammed (2003) in Ajisafe (1980) to develop physical, mental, social and spiritual health of students and staff schools, health facilities should be curative and use in nature. The reforms, the specific goals of school health facilities should be the promotion of positive health that ensures health maintenance and promotion among learners and staff. School health facilities should as a matter of priority place emphasis on treatment of disease rather than on preventing diseases.

The Joint Committee on health problems in Education of the National Education Association (NESA) and the American Medical Association (AMA) view school health facilities as the health facilities provided for school students and staff by physicians and allied health personnel in order to protect and improve the health of the school students thus aiding their growth and development and enabling them to benefit from school experience.

Nwanachuckwu (2000) is of the opinion that "school health facilities can be utilized to provide school health care, immunization facilities infectious diseases, prevention and control of endemic diseases, providing appropriates treatment of common diseases and injuries, and provision of essential drugs and supply". The above assertion could be realized with the corporate activities of school teachers, physicians, dentist, nurses in order to appraise, promote, protect and maintain the health of all school students and the school personnel through:

(a) An appraise of the health status of the school children and school personnel

(b) Counseling school students, parents and others about appraisal finding.

(c) Encouraging the correction of remediable defects

(d) Assisting in the identification and education of handicapped students and staff.

(e) Helping to prevent and control diseases.

(f) Providing emergency facilities for injury and sudden sickness. World Health Organization (1974).

2.5.1 Components of School Health Facilities

Frank (2007) asserted that in developed countries of the world, there are some basic components of school health facilities they are:

- Curative: Providing care for the sick students and staff
- Preventive: for the protection of the health of the school students and staff.
- Special services: dealing with specific problems e.g malnutrition or specific groups e.g. pregnant women
- Social welfare: availability support facilities for the disadvantages group's e.g chronic sick, mentally and physically handicapped orphans etc.
- Health education: giving the people essential information to modify their behaviour in matters affecting their health.

However, the above classification can be used as a simple check-list for reviewing the health facilities in any community and other learning environment.

2.5.2 Development of School Health Facilities Maintenance

Numerous public health initiatives have promoted the development of school health since the American era, infect, Frank (2007), advocated a "healthful situation" that promotes physical exercise during the school period. However, prior to the mid-1800s, efforts to introduce school health programme into the school were isolated. It was not until 1840 Rhoda Island passed the first legislation to make health education mandatory and other states adopted this concept of comprehensive school health facilities maintenance.

This background led to school program, receiving major attention as a means to promote public health and prevent disease. In 1970's most government in developed countries had started implementing health education programmes in most public schools. One of the earliest health care programmes was in Asia which was established at Kalatura legislation in 1926. The main focus of the establishment was the care of infants, pre-school and school children, control of communicable diseases and health facilities maintenance services.

In Africa, the failure of school health facilities maintenance services to meet up the health status of school students and staff is a major problem; the quantity and quality of the health teachers in relation to the existing health situation in most school is very poor. Most African countries have not been able to provide or maintain adequate healthful environment and assistance in varying degree in solving problems such as food, housing, recreation, and personal problem. A successful school health facilities maintenance proramme is considered in a four dimensional perspectives viz: health services, health situation, healthful school living and relationship on the community setting these four dimensional ways was opined by (Norman, (1972) and Adegbite, (1990). Against the above background however, it has

become very essential to consider the school health facilities maintenance as a very important tool in promoting the health of the school students and staff. To achieve this target, it is the major responsibility of the school health facilities management teams or department and other professional within the community and in a learning environment to promote the health status of the school students and staff, this assertion was made by Adegbite, (1990).

Most communicable diseases are with school students, because they are exposed to a loot of health hazards in the learning environment, hence health facilities maintenance is an instrument in the prevention of diseases in school.

According to Park (2000), most of our learning environments are plagued with infections and parasite disease due to poor health habit maintenance attitude and poor sanitation system which usually are the courses of morbidity and mortality in many developing country. Most of the school students, environmentally related disease such as malaria, typhoid, diarrhea and dysentery are a constant threat to life as opined by (Lucas and Gilles, 2003).

Lack of good portable drinking water supply and poor environmental sanitation in the school environment are the reasons why disease associated with un-hygienic disposal of students and staff feaces and refuse due to lack of good health facilities program in school are very common in the learning environment. The most important incidence i.e as a result of poor environment includes diarrhea and intestinal worm infections which account for over 100% of the total disease in most of our learning environment (WHO, 2005).

More importantly, inadequate supply of portable water increases the risk of schistosomiasis, guinea worm and skin infections Park (2000). The environmentally related diseases can be controlled and prevented through good health facilities maintenance programme and improved environmental sanitation in the society. Ugbonnaya (2000),

remarked that proper and well planned school health facilities maintenance program is usually aimed at increasing the students, ability to withstand stress in the learning environment especially through good nutrition and proper available and maintenance in schools.

An improved health standard of school students should not be based entirely on curative services but also acquiring scientific facts hence Tons (1988) opined, that in any health scheme, there should be provision of social and basic knowledge of science of hygiene, which would enable people to live in harmony with their environments this could be accomplished through health facilities maintenances services in other words, their environment should be clean and tidy and also observe some good health rules of preventive medicine.

In another development, a good school health facilities aid students in selecting and maintaining a life style that would give a better life as well as better society; Regular inspection as opined by Dorathy (2002) of school students in the respective hostel and classes is at all time attain through good standard of personal cleanliness.

Since the health needs of the ever growing school students are specific and it takes a joint effort of the parents, the school and entire community to ensure that health of the school students and staff is not eventually jeopardized. It is because of this background that the National health Policy (NHP, 2006) in Nigeria recognizes the value of school health facilities and therefore, makes provision further under the primary health care program (UNICEF, 1989).

The school health facilities maintenance will strive very well in an atmosphere that is devoid of ill-health Ikeh (1986) supported that to be truly healthy, a person should enjoy a balanced relationship of the body mind and complete adjustment to the environment". He went further to emphasize on the physical surrounding of land, the school building outlay,

individual in the environment, planting equipments, air, the virus, bacteria, and often organizing all these components made up a learning environment.

2.5.3 Purpose of Availability and Maintenance of Facilities in School

The purpose of providing school facilities in a learning environment cannot be over emphasized. For school students and staff to attain a maximum health standard, the following purpose has to be accomplished.

(a) The school facilities is carefully maintained and monitored will help to promote the maximum physical, social, emotional and psychological well begin of growth of schools students by providing a school site, direct health facilities, health education consultation room.

(b) The school health facilities help to improve students' academic achievement by intensifying school health facilities through the school nurse or professional. Expansion of the entire school health facilities components can also help in applying individualized interventions at identified health constitutions

(c) The availability of the school health facilities will further assist the school heath officers to asses the following areas, vision, date of last check up, student's accommodation, eating habits, and other health activities within the school premises.

(d) The availability of the school health facilities will further assist the school health officer or management teacher to identify pregnant and/or parenting teens and provide professional counselling services as well as track down their attendance in order to help decrease the number of days of school missed and also help to address issues that might keep them from completing high school.Ugbonnaya (2000).

2.7 Availability and Maintenance of Welfare Facilities in School.

The concept of welfare facilities, welfare means the provision or making available facilities that are necessary for the well-being of people at works, such as adequate washing, toilet, rest and changing facilities and somewhere clean to eat and drink during breaks time Sheingold (1992).

Welfare facilities should be planned for all school and maintenance for emergency activities. Access to the facilities must be via a safe route.

However, whoever has overall control of the school is his responsibility for ensuring that the legal requirements for welfare are met. The school management should know that every one that is working under them including students suppose to provide with suitable welfare facilities. The school management must put in place necessary facilities for every-one's well being. In addition to the provision of welfare facilities, regular maintenance and cleaning of then will be required. Particularly dirty work hazardous to health, e.g. adequate supply and maintenance must be considered for all staff and students to feel free from dirty environment.

2.6.1 **Availability and Maintenance of Welfare Facilities planning in school.**

Park (2000) maintained that regular apply in providing welfare facilities, need to be considered in both pre-school setting and post-school setting, earth and safety condition are very important in managing human resources in every organization the following facilities need adequate maintenance such as Schiffers (1980):

(a) Toilet Facilities:

In School setting, facilities should be provided or available by other arrangements. Provided means accessible within the building for instance, within the classes, and within staff offices for easy and simple access to toilet for staff and students. This could be a portable toilet facility required for suitable and accessible to his or her needs.

The staff and students are always in school never in any area, so therefore they should be provided with portable facilities unless the time for

working day is planned to allow going outside. Wither regular maintenance or emergency work, one will still need to make arrangement for adequate welfare facilities to be available for staff and students at the some time.

(b) Washing Facilities:

Washing facilities must be provided made available and accessible in the same way as toilets. They are very important for those people carrying out toilet maintenance and relating tasks, and for those who may be exposed to areas, like laboratory, student's dinner's hall, watering areas. Washing facilities are required immediately adjacent to toilets. Additional washing facilities may be needed where food is prepared;

Soap and water should be available in the toilet and labs where practical is taking place. Means of cleaning materials be provided, together with drinking water, etc.

The school management will need to consider the provision of separate facilities for men and women however, with respect to washing facilities, this will make the comfortable and good atmosphere for teaching and learning.

(c) Accommodation/Hotel Facilities:

Rest facilities must be provided made available and accessible. As for toilet facilities, they should have sufficient seating and facilities for heating food. Non-smoker should be able to use the rest facilities without suffering discomfort from any types of secret.

(d) Drinking Water:

A supply of drinking water must be made available accessible like toilet and washing facilities. Published by the health and safety. Executive's

supplies in a container, this must be clearly labeled and the water changed often enough to prevent it becoming stale or contaminated.

(e) Food Services Facilities:

Even though tertiary institution unlike boarding secondary schools have no plan on feeding students, but the provision and maintenance of dining halls be constructed and equipped that students and staff have access to food at all time. It is important therefore, that dining-halls and food services facilities e.g. Kitchen and all auxiliaries for healthy preparation and severing of food.

2.8 Availability and Maintenance of Sport Facilities in School.

The concept of sport facilities: outdoor sport facilities, football and athletic fields, tennis, bask ball and volleyball court etc. are important part of the community which most of the African countries pay particular attention to.

Where outdoor sport facilities exist, young and old alike who want to have a health life and enjoy friendly competition have the responsibility to keep it.

It's important to stress that sport facilities are not liked only to the performance and the spirit of high level competition. In modern society sports hold more and more a social value. Therefore the provision or availability and maintenance of sport facility must be based on the concept of the system as a whole and look at sports as a form of exercise and service to the community where the situated school.

Other useful facilities in the school environment are the play grounds, such as football, tennis courts, hockey and cricket fields; All these depend to a large extent on the games emphasized in the environment. For instance, in most developing countries, soccer is so popular that every school would make provisions for this in the school premises. Often, such soccer fields are lined all round by athletic tracks for track events while field events are

organized within the soccer field especially outside the soccer season. It is not uncommon, too, to find badminton courts, volley ball courts, and basket ball, or handball courts, also laid out at various corners in the school premises.

2.7.1 Availability and Maintenance of Sport Facilities planning in School.

The most important thing to do initially is to organize the different stages of building process in which sport facilities are made; planning stage where measurement and location are defined in relation to the sport activities and targets, preliminary design stage in which partial and distributive characteristics, general criteria for technological and building choices are fixed; feasible in which operational and maintenance aspect have to be considered in order to reduce operating and to minimize the global problems.

Open-air sports facilities must not only give young people the chance to do some kind of sport and physical activities, but they must take into consideration also older and disabled people striving for a health life and not despising competition.

The planning of available sport facilities must be based on the concept of facilities as a system and of sports as practices and service within a rational organization of the space and areas at one's disposal. Generally, it is enough for a district or school to have 1 or 2 multi-purpose fields with synthetic floor-standard measures 40-200; with lighting and wire-net rencing-where many sports can be done such as five-a-side football, handball volley ball and other gymnastics activities; generally, structures such as dressing. Rooms, bath rooms, and terraces for spectators are not included in the plan of such school facilities, these being mostly used by young people living in the school. If, however, the facility should also dispose of dressing rooms and sanitary services, a good solution would be prefabricated dressing rooms and sanitary services which are transportable and usable in others places and for other events. As far as maintenance is concerned, it is necessary to employ materials which don't require particular maintenance and which can be easily operated. There will be

a synthetic permeable floor on a draining foundation that can quickly discharge a great amount of water, there will be flood light on 12-15m piles for average lighting of 80lux, and there will be a 3.00 or 4.00m high plastic – coated wire-net fencing.

2.7.2 Availability and Maintenance

Sport Facility with football ground for competitions, running track for fast running, boards and throwing circles, football ground for training purpose and multi-purpose field with synthetic floor.

This type of facility suitable for school and smaller middle towns where football is the main sports at the same time; however, it allows doing some track and field athletic and teaming sports such as volley ball, basket ball, and hand ball.

These could be the following standard requirement;

- A regular football ground – 100,00 * 60,00m with grass floor and automatic irrigation system divided into sectors and fold-away irrigators, running track for fast running.
- Long jump and high jump take-off boards, discussant hammer throwing cycles;
- A 90*50m training field with either floor, equipped with lighting system for nocturnal training session with an average lighting of 100 level,
- A 40*20m multi-purpose field with synthetic floor.
- A terrace made of prefabricated element for about 400 spectators;
- A building consisting of 4 athlete dressing-rooms 2 referee dressing-rooms technical rooms, first-aids store-rooms, warehouse, bar, and ticket officer schiffers (1980);

- Separate ways for spectators, athlete, and referees. The wire-net fencing is at least 2.50m high from the walking surface.

2.7.3 Sport Facility Maintenance and Operation in School one Aspects Gaining Increasing in Influence is Engineering Open-air Sporting plants. How to Maintained and Operate the Facilities.

It has only been within the last five or six years that value analysis has been taken into consideration already at the planning stage of the facilities.

In addition, spot activities are more and more considered an opportunity to be offered to every citizen not only students and staff are well aware of the important of this field. Whether it is on their own or together with public- law corporations, private enterprises demonstrate a growing interest in the providing and in the following operation of sport facilities.

2.9 Availability and Maintenance of Infrastructure Facilities in School

The school infrastructures facilities are also referred to as school educational facilities. There are varieties of infrastructure facilities around that can be used to make the meaning more important and interesting. School infrastructure refers to the put in place to aid effective teaching and learning in the school such as sitting, building and provision available physical equipment like laboratories, workshops library, etc. (Ojedele 1998). Base on the above definitions of school infrastructural facilities the researcher will take each structure one after the other for more literature in finding detail

2.9.1 School Buildings

The school infrastructural facilities required by each school would vary from time to time depending on the size of the school, programme orientation and level of education.

Durasoro, (1998:55) and Innih (1978) stated that the following types of building are needed for a school to start. These are “classroom blocks, administrative blocks, hostels

blocks kitchen and dining hall, physical and other science laboratories, library block, technology workshop and typing rooms assemble hall, students common room, staff quarters both senior and junior staff quarters and so on.

The school infrastructure facilities are the space interpretation of the school curriculum according to Okeke (1985:145). Knezevich in Okeke indicated that far more importance should be attached to the impact of facilities on educational experience and the educational methods used within school buildings. Therefore, an effective school infrastructural facilities is a controlled environmental condition which aids the teaching and learning process and at same time protects the physical well being of the occupants. Okeke(1985) further explained that, the extensiveness of modern-educational undertaking and the variety of duties that must be performed therein have made school building something more than a mere collection of classrooms of varied sized. He said that auxiliary spaces are needed such as auditoria, food services facilities, student's common rooms, administrative and counselling offices and health annexes. He finally indicated the general public use facilities such as corridors halls, cloak rooms, lobbies are enemies of movement for school users. Okeke highlighted some other building such as sits services facilities which he said include toilets, and car parking spaces, building service facilities such as junior and senior staff quarters, shops, laundry and refuse disposal facilities.

The most important areas of a school building are those spaces where administrative and teaching and learning take place. Today's schools demand a diversity of learning designed for the individual, small groups of students and large classes. Instructional methods, curriculum materials course contents and class organizations have changed and will continue to change, they all affect the ways provisions are made for school building (Okeke, 1985:149).

School buildings have long life span and so they should be available to meet both immediate and long-range needs. Okeke (1992) argued that the most important element in school building is "an effective school building investment policy will succeed in building the right of schools in the right places at the right time an at the right "cost" here the right kind of school means a school which is both capacity range and variety of accommodation suits the educational needs of the community it services.

2.9.2 Structural and Mechanical Features

Structural and mechanical features include foundation walls roofs, floors, ceilings and electrical wiring.

a. Structure should meet all barriers both externally and internally.

b. Foundation should be strong and stable with proper expansion joints;

c. Roofs should be structurally sound, with good drainage.

d. Entrances and exists should be strategically located so as to permit free students movement.

e. Well maintenance ceiling should be ensured to adequately prevent sound;

f. Interior should be free of prikable asbestos, and dangerous materials.

g. Water supply should be adequate with sufficient pressure to meet health and safety needs umar(1998).

2.9.3 School Building Safety

A. Site Safety: the site of the school building should consist the following as the most essential they in making sure that adequate safety is provided in terms of site safety thus;

1. Access streets should have sufficient signals or sign to permit safe entrance, and exit from school areas.
2. Sidewalks and steps should be available for safety

3. On site walks and steps should be protected by proper signs and signals.
4. Vehicular enhances and exists should be safe for traffic flow;
5. Students play areas should be segregated from vehicular traffic and pedesterian walk ways.
6. Location, play grounds and games equipment should be free from hazards Umar (1998).

B. Building Safety:

The building of the school facilities nee safety in all round and proper utilization for students and staff in often to benefit in the school safety of building can in this formed, thus;

1. Classrooms door should be adequate to provide free movement.
2. Emergency doors should be provided where necessary.
3. Exits should be marked the exits sign.
4. Glass should be properly located and protected to prevent accidental students and staff contact and to ensure their safety;
5. Emergency lighting should be provided throughout the building;
6. Stair risers should be provided where necessary.
7. Floors should be maintenance in a nonship condition.
8. Multi-story building where applicable should have at least two stair ways;
9. Traffic areas should terminate at an exist;
10. Automatic a manual fire alarm system, with a distinctive sound flashing light should be provided.
11. There should be two independent exist to safety from any point in the school building.
12. If possible, non combustible or fire resistant materials should be used throughout the structure.

13. Adequate fire safety equipment should be properly located at strategic points.
14. Student's emergency treatment clinic should be provided Umar (1998).

2.9.4 Administration Building (Support Space)

The administrative spaces or building as observed by Durosaso (1998) was usually carried out the end of a building, and was usually sand witched among classrooms. He further stated that it was usually at assistant. At tertiary level he said, "Such spaces are provided in a separate block to house the principal officers, staff officers, clerical staff estate management office or works department etc.

According to him, the administrative spaces were strategically located to enable the principal officers and staff to keep enough supervision of students works.

The maintenance of the administrative building was done by both students and the junior clerical staff of the school. Cleaners and other auxiliary staff though daily clear the administrative block and often the surrounding of the school. In addition to the above specialized facilities, the following are equally essential, these are general public facilities, such as corridors, halls, lobbies and soon other specialize the facilities include site service facilities, for example toilets, and car parking spaces owoeye(2000).

Durosaro (1998) pointed out that, circulation building or spaces such as corridors, lobbies, stair cases are usually constructed as appendages to the instructional spaces. The classroom corridors and lobbies were usually specially designed for students to stay to relaze during short breaks. The circulation spaces for are usually cleaned along with classroom on daily basic by the cleaners.

2.9.5 Mechanical and Electrical Facilities in School

Chemical or electrical facilities will enable school to have efficient and graduate good students and staff to have mind or zeal to work, without working some were to go, the

school management should make sure that, the following facilities are well provided and maintained.

- Electrical service should be ensure,
- Electrical controls should be safety protected with disconnect switches easily accessible;
- Outside water supply should be adequate for normal usage;
- Labeled electrical system should be provided;
- Well maintained light sources should be properly placed to provide adequate lighting.
- There should be adequate number of drinking students use and proper maintenance;
- Number and size of staff rooms should meet or exceed code requirements;
- Drainage systems should be properly maintained to meet or exceed health and safety requirement;
- There should be provision for fire-extinguisher in case of fire outbreak Owoeye(2000).

2.9.6 Maintenance of the Infrastructural Facilities in School

- Windows, doors, walls, minimum maintenance; and finish requiring minimum maintenance;
- Outdoor light fixtures, electric out lets, equipment and other fixtures, should be accessible for repair and replacement.
- Classroom floor coverings should be the type which requires minimum care;
- Ceilings and walls should be the lands that are easily cleaned and resistance to stain;
- Built in equipment in the laboratories should be designed and constructed for ease of maintenance;

- Floors, in the dining halls, kitchens, or cafeterias and corridors should be the types require a minimum of maintenance;
- Walls and Ceilings in socially designed areas should be the type that can be easily cleaned;
- Recreational areas should be kept clean always;
- Adequate custodial storage space, with water and drain should be accessible to all areas;
- Adequate electrical outlets and power should be available in every area to permit routine cleaning Owoeye (2000).

2.9.7 Availability and Maintenance of Equipment in School

Equipment and Materials are essential in the school for educational use Facilities such as furniture, laboratory equipment and materials have direct significance in the teaching and learning process. This is because without them, the empty building and structures cannot actually be used for the purpose for which they are meant.

Science and technological infrastructure can generally be defined as intermediate inputs that provide the basic for the functioning of other technologies or provide essential services to other sectors of the economy. Technology infrastructure consists of science, engineering and technical knowledge available to industry, such knowledge can be embodied in human, institutional, or facility forms more specifically, technology infrastructure includes genetic technologies teaching information and research and test facilities as well as less technically explicit areas including information relevant for strategic planning and development of equipment facilities in school Owoeye (2000).

At every level of science education, laboratories are perceived as a vehicle for curriculum enhancement studies including Hardley & Sheingold, (1992;) have indicated that a properly equipped and functional science laboratory has the potential for enhancing

science learning. Science laboratories have a central and distinctive role and use of science equipment and science educators suggest that there are rich benefits in learning from using laboratories facilities. In many Africans countries, research has revealed shortage in the number of laboratories in schools.

A study by Jones (1990) found that 45% of the schools suveyed in selected African countries indicated insufficient laboratories. Alebiosu, (20000 and Onipede, (2003) reported that many schools in Nigeria do not have laboratory with minimum standard facilities inadequacy in the availability of laboratory facilities in schools.

Babura (1989) indicated the relevant infrastructure for teaching and learning for expected ends were to be achieved, "a variety of activities must be engaged in by persons of various talents". Teachers cannot enjoy their activities by always concentrating on the chalkboard work. They need different equipment to attract the interest of the students who need more practical and less theories.

2.9.8 Availability Furniture Facilities Needed in School.

In an educational environment like tertiary institutions, furniture are needed to facilitate learning. Available furniture required in each school will depend largely upon the type of school and the type of activity that is carried out in that school. These types of furniture facilities needed in a school may include the following: tables, desks, lockers, drawers, chairs, bench, stool, these may be classroom and office furniture, hostels and staff quarters furniture and so on. All these furniture contribute significantly to teaching and learning facilities in the school setting.

The main is for the school management to provide a school building plan by which such building will be adequately furnished for the presence and the future use for an effective educational programme without neglecting the types of furniture the school need.

Ovwigho (1990) explained that necessary equipment in a school may be calculated and analyzed based on different categories and indicators are of different categories.

According to him, In discussing the furniture he identified three percentages of a situation whereby a school in a state may be considered to have sufficient or insufficient furniture.

The school manager heads are the custodians of their school facility, it is their responsibility to ensure that right type of furniture needed in their schools are in large quantity and quality. The furniture should also be in good working condition and well protected. They must ensure, through close checking and supervision of the relevant furniture facilities used by the student and staff.

2.9.9 Maintenance of School Facilities Available.

Maintenance involves maintaining items such as buildings, furniture and equipment as far as possible in their original condition (UNESCO, 1984). Peretomate (1995) identified the difference between maintenance and improvement. According to him, the needs of staff and students change as the school is put into use. He observed that often the experience of a building or school facilities as Shelves in use would demand on alternation in the original condition of the facility. When this is done, it is not only maintained but also improved. He maintained that what passes on as maintenance in the school is also actually improvement and more so because the original state of the facilities leaves much to be desire.

In the context of the maintenance as defined above, Olagbo, (1987) viewed maintenance as any work (such as repairs servicing and painting carried out on any component of the plant with a view to keeping it in or restoring it to optimum working conditions Vickery (1984) points out four policies options that are open to the planners considering the maintenance of the stock of school building, furniture, equipment and facilities in a whole. These are as follow:

a. No maintenance at all

b. Emergency maintenance

c. Adhoc maintenance

d. Preventive maintenance

All these are used in maintenance of school facilities at different category and stage where each school facility will not be left out without maintaining or repairing it at all.

A. No Maintenance at all:

This is a situation in which maintenance is adjusted for costly to include in the school budget or where government judges that there is no need to charge maintenance against public funds. The decision not to maintain might be taken, if the majority of the schools in a given government area are in the hands of community.

B. Emergency Maintenance.

Money is hardly budgeted for emergency maintenance of school building and facilities on most tertiary institutions of in Kaduna state. In areas prone to natural disasters, the practice is always to divert funds set aside for other purposes to the repairs of facilities damaged by the natural event. One might argue that this is not a policy. It is however a practice by administrators and government functionaries in the state.

C. Adhoc Maintenance

This is the provision of a general sum of money in the budget which is used at the discretion of the education authority to finance unplanned maintenance activities one feature of this option is that the resources budgeted are always too small in relation to the work to be done and the funds disbursed, are therefore, supposed to be for the priority assigned.

D. Preventive Maintenance

It should be observed that the options described above are based on expediency. The most preferred option would be to prevent maintenance or plan of school facilities. The preventive is based on the design, use and analysis of regularly conducted surveys and work would involve not only occasional repairs but maintenance undertaken at regular intervals

with a view to reducing or preventing the future deterioration of facilities. A good example of this is regular painting of woodwork and metal work against rust (Vickery (1984). Eden (1987) affirmed that maintenance and repair. Programmes must be regular and through. He said that repairs and adjustments must be made promptly before major damage occurs. He suggested that vehicle should be examined regularly and the moral character, physical condition, and demonstrated driving ability of the drive must be scrutinized before his employment. Understanding school management would require the performance of the different functions of the school managers.

2.9.10 Personnel Involved in Managing School Facilities

Musgrave (1979) argued that management of school facilities can be effectively done, sustained and actively promoted in the school system,and the society at large will be involved in managing school facilities. In this situation the personnel that have bearing in managing school facilities include the following:

The school administrators

School staff i.e. academic and non-academic

Students

Community members

a. The school administrators are the custodians of their school facilities. It is therefore their responsibility to ensure that all components of the facilities are in good working conditions that are well protected, and used for purpose for which they were acquired. It is the duty of the school administrators to motivate and mobilize his/her teaching and non-teaching staff as well as students to cultivate the habit of maintenance culture with respect to the school facilities.

b. School staff: It is the best interest of all staff in the school system to assist their school management in maintaining all types of school facilities as this will create a conductive

teaching and learning environment and enhance their own work. As staff, it is his responsibility to see that everyone of classes facilities are in good condition and to promptly report any dilapidation or deterioration to the school management for necessary maintenance action.

c. Students: it is not far fetched to assert that a clean, well maintained school facility provides a more conducive atmosphere for the effective teaching and learning process than unkept and dilapidated school facilities. As future leaders students need to be encouraged to imbibe the habit of maintenance culture on their part, they must be self-responsible to assist the school authorities in maintaining the school facilities. This can be done by obeying any rules made and enforced on them.

d. Community members: This can begin with parents getting their children to routinerly keep in good condition their uniforms, books, and other personnel school properties. Once this habit has become ingrained, there is the likelihood of transferring it to the school setting.

2.10 Constraints to the Availability and Maintenance of School Facilities.

All impediments to the availability of viable and adequate school facilities in the educational institutions are referred to as constraints in this research.

Since educational managers are directed towards the realization of educational goals using available school facilities, what then are the possible problems or constraints confronting the maintenance of school facilities? To provide some insight into the constraints, the write up the background provided problem of school facilities. Same institutions of learning often lack basic infrastructural facilities to perform effectively. Most

of the time classrooms or lecture halls were inadequate and as a result, lecture hall were held in converted classes or small halls that cannot contain larger number of students. Even where they exit such lecture halls were so dilapidated totally not conductive to the learning process. The situation can be worsened by the general lack of maintenance culture. Where gigantic structures such building as a result access to external loans, such buildings were left in serious disrepair in many cases, even the technology and expertise to affect maintenance were not available. The result of the structural depreciation is unparalleled in the country (Enaohwo and Eferakeya 1989). Durosaso (1998) stated that owing to the present day inadequate provision of funds for the schools, two major factors had arisen in connected with school facilities. The first is that there were insufficiency of funds to provide adequate facilities for the growing enrolment in the school facilities cannot be adequately maintained due to lack of funds. Hence, the example in the school is such that the facilities were in poor state owing to over-use and poor maintenance. According to Durosaro (1998) buildings in the same school were either uncompleted or completed but very ragged and dilapidated.

Anderson (1971) noted that it is almost axiomatic that physical environment of a school is an important factors I for students learning. One other problem or constraints confronting the school management is maintenance of facilities, According to Anderson (1971), in the area of small facilities maintenance is necessary to retain the school artisans to handle the modern gadgets used in the schools. Owing to frequent electricity power and water shortage some of the equipment have become damaged and they need the attention of expects.

Manye (1999) lamented that the main constraints in maintenance of school facilities include inadequate infrastructure, insufficient equipment and materials poor staffing and low staff morale, corruption poor funding, indiscipline and poor performance by staff and have been built for engineering and technology, the have not been connected to power, while

expensive equipment meant for use are left at the mercy of day and night marauders where giant electricity generator have been supplied by the government or individual doune for use in school they are abandoned while the school wallow, in darkness and their workshops in total neglect.Umar (sited in Sani, 1998) affirmed that, the actual problems which have involved to the fall of educational standard are the situation with regard to infrastructure in the school.

He maintained that open air lessons have become common in the tertiary institution. The situation is waging most especially during examination where students sit in a crowded condition. There are over-crowding in the hostel, classes or lecture hall, laboratory etc. He added that it is obvious that the problem is not only that the schools cannot be maintained but the inability to build more school to cater for the increasing population of he school students. According to him, a combination of rained infrastructure and over-crowding in lecture halls are sure to defect the efforts of even he most dedicated staff in his desire to ensure that meaningful learning takes place.

In the views of Enaohwo and Eferakey (1989), funds for the development have been the greatest cause of distress in most of the developing counties including Nigeria. They said that as a result, school facilities take off only on the drawing boards because of shortage of money to see them through. Fadipe (1998) noted that school facilities maintenance becomes complicated with the increase in the enrolment in the tertiary institutions. According to him, facilities provided for few students of a manageable size are being used for thousands of students today, which almost multiply the number of students been provided before. The teaching and learning programme of the tertiary institutions as a whole, and then the need of individual schools should determine the type and quality of facilities and equipment in the school should get. However, apart from the problem of the inadequate supply of equipment

and facilities as observed by Nwegwu (1978) there is also the problems of how to make equipment effective and useful to the students and staff in general.

2.11 Empirical Studies

Olaitan,(2006) an Assessment of the management of school facilities in Kaduna State Secondary Schools

This author used survey method of research in order to describe events and situations found at various schools. She used checklist of assessment in the questionnaire in respect of respondent's opinion so that it will enable the researcher to elicit the responses accordingly and the population of the study are 190 principals and 7026 teachers.

Moreover, the author use stratify sampling technique to select one school sample from each zonal office in the statistical tool the researcher used simple frequency and percentages for analyzing the data collected from the respondents.

The main findings of the researcher showed that some schools have the available facilities, while others did not have enough as stated before. Most of the general responses from the respondents on facilities in school showed facilities available to some extent while in schools facilities' were inadequate, even the available once were in critical condition, they renovation, replacement and reconstruction most especially in the rural Secondary Schools. This research is related to my research because she assess the management of school facilities in secondary school in Kaduna state which related evaluation of availability and maintenance of facilities.

The researcher carried out a good research in the state but the only area this differ from my research work is that my owned cover tertiary educational institutions while her owned was within secondary school the area of uniqueness was study facilities.

Ibrahim (2000) conducted a study on the "Impact of School Plant Provision on the Management of Teaching and learning in Secondary School in Taraba State.

This Author carried out this research in Taraba State and he used the survey method to investigate a target Population. It was used as a result of size of the Population are 15000 students and 400 teachers and area covered for the research. Simple random sampling which enable him select 100 teachers and 300 students.

The researcher used self developed questionnaire for data collection, He designed and allowed expert and professional to criticize the question for validation. The researcher used statistical package for the Social Sciences (SPSS) the statistical procedures adapted included frequency and percentages tabulation. T-Test was used in testing the relationship between the groups of respondents.

Researcher came out with a good finding based on the research area. What he found out was that School Plan has positive impact on teaching and learning which majority of the respondents agreed up on. They were of the view that without good plant, teaching and learning cannot be meaningful and learning will never be permanent because there will be no access to practical, exhibitions, exercises and other practical work due to lack of enough Planning.

The area where it related my research was in studying school plant which the same with school facilities, it was related in area of teaching and learning, provision, management etc. The only area where it different from owned is that, my study cover the following; availability, maintenance of facilities in tertiary educational institutions in Kaduna state.

Sanusi, (2009) The impact of Management information System on the Administration of tertiary Institutions in Kaduna state. The research design used in this study was survey method, in order to collect sample from the entire population for generation of data collected from the respondents. The population for the study comprise administrative staff, academic

staff, personnel staff from information technology department and students total are 59327, sample used are 381.

Researcher used Structural Questionnaire which was developed by her for easy collection of data from the respondents which carried strongly agreed, agreed, disagreed, strongly disagreed and undecided.

The statistical tools used was inferential Statistics (ANOVA) which is used to test for the hypothesis and simple frequency and percentage s were also used to calculate the data in a simpler form. In the inferential Statistics analysis of variance (ANOVA) was the major Statistical tool for analyzing the data. The research is related to my research, in some aspect it has heterogeneous relationship in terms of scope and limitation and the use of variables in the questionnaire.

The researcher came out with vital information for the use of ICT. In tertiary institutions, which enables the institution to have access to all staff within a short period of time, Minimize resources and prevented lost of information or data either from staff or students and with use of internet connectivity which enables the user to have direct access to information within a short period of time with both staffs and students in the tertiary institutions in Kaduna State.

This study differ with my in such aware that ,management of information system on the administration of tertiary institutions while cover even this topic in term teaching and learning of facilities and the uniqueness to this study is tertiary educational institutions in Kaduna state *etc.*

Maina, and Jumare (2013) conducted a study on "Assessment of the provision and maintenance of teaching and learning facilities of agricultural Science in Secondary Schools in Zaria Metropolis.

The researcher used survey method of design for the study. It was considered suitable due to the nature of the research that made use of sampled opinions for measuring respondent's opinion and making generalization in the entire population.

The researchers used self developed questionnaire for data collection which was validated and realizable through the use of pilot test.

They used

The researchers came out with the findings, that; the facilities for teaching and learning Agricultural Science were inaccurate.

The major sources of these facilities given by the government and school managers were not maintained.

Lastly, the respondents did not know who the individual responsible for maintaining these facilities, whether it the government or schools managers.

This research is basically related to present topic of investigation in tertiary institution in Kaduna State.

2.12 Summary

An attempt has been made in this research to utilize the relevant literature to examine availability and maintenance of facilities in tertiary institutions in Kaduna state. Educational facilities as viewed by different authors were found to be very much appropriate and important to teaching and learning in educational institutions. Theoretical framework was highlighted, where the research reviewed the management, system theory , it was noticed that learning facilities enhance teaching and learning and availability of information communication technology was also highlighted in the review.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discussed the methodology used in the research. The chapter explained the population of the study, research design, sample and sampling procedure, research instrument, validity, reliability pilot study of the instrument , procedure for data collection, administration of the instrument and procedure for data analysis.

3.2 Research Design

The research evaluated availability and maintenance of facilities in tertiary institutions in Kaduna state. A survey research method was adopted for the study. This allows for the collection of data from heterogeneous groups. This called for inferences and generalization to be made on the entire mother population.

3.3 Population of the Study

Okeke (1995) defined population as the collection of elements, units or individuals for which information is sought. The elements in the population are units of analysis and their nature is determined by the descriptive objectives.

The population for the study consisted of all the administrative staff, Academic staff and non-Academic staff and students of all tertiary institutions in Kaduna State. The entire population of the study was 57,967.

3.4 Sample Size and Sampling Procedure

Sample size of the study comprises of representatives of administrative staff, Academic staff and Non-Academic staff, and students from tertiary institutions under study. Sample size was selected using random sampling technique. The ratio of representation of each institution differed significantly due to one obvious imbalance of the population. The researcher adopted The Research Advisors [2006] recommendation for drawing the sample size in their table so as to get reasonable representation in the research. Detailed information of sample size are contained in table 3.1

Table 3:1 Population and Sample Size of the Selected Institutions.

S/N	Institution	Management Staff		Acad. And non-acad. staff		Students		Total	
		Pop	Sample Size	Pop	Sample Size	Pop	Sample Size	Pop	Sampled Size
1	A.B.U., Zaria	4727	30	1751	11	36,000	225	42478	166
2	Kad. State coll. of Edu.G/waya	324	10	379	7	5020	31	5723	48
3	Kaduna Polytechnic	49	3	647	3	8081	15	8777	104
4	Shehu idris coll. Of health sci. and tec. Makarfi	50	4	103	25	836	75	989	21
	Total	5474	47	2880	46	49937	346	57967	339

Source: Registry Dept of respective tertiary institutions, in Kaduna State.

Stratified random sample technique was adopted for the purpose of the study on the basis; that Kaduna State was divided into three (3) strata, comprising the 3 sensational zones: Northern senatorial zone, the central and southern senatorial zones. Names of

institutions were randomly selected on the basis of the zone, A.B.U. Zaria Northern senatorial zone, Kaduna State College of Education southern senatorial zone and one more institution was added. It was selected in order to year of establishment and the nature of different types of institutions in the state. This institutions selected were Shehu Idris College of Health Science and Technology, Makarfi. The four institutions were randomly selected from the sample for the study. The rational for using stratified random techniques was to give equal opportunities to all the institutions in the state.

Based on table 3.1 the number of population and sample size indicated that 339 sample was used from the mother population for generalization and analysis of the data.

3.4 Instrumentation

The research instrument used was questionnaire with scale of Available, Not Available and No Idea, Maintained, Not Maintained and No Idea as options for data collection. The use of the options above helped in confirming the knowledge and opinions of the respondents on the study.

The questionnaire was divided into the following sections: section one (1) request letter, two (2), personal information, three (3) guide- lines for filling the questionnaire, and four [4] to six [6] are opinion statements on availability of facilities in tertiary institutions in Kaduna State.

3.5 Validity of the Instrument

Asika (2001) defines validity as the degree to which a measuring instrument measures what it is designed to measure. Validity refers to the extent to which an instrument measures what it intends to measure. The instrument was given to supervisors in educational administration and planning, in the Faculty of Education, A.B.U. Zaria, to ensure that it was relevant to the research topic and areas under investigation. Moreover, professionals in educational statistics checked the instrument and suggested some corrections, which were

affected. In support of this Kerlinger (1986) argued that validation of the content of the research instrument by experts, is an important and acceptable technique. Therefore, this upgraded the quality of the instrument.

3.6.1 Pilot Study

A pilot study was carried out in Federal College of Education Zaria (F.C.E. Zaria) with 30 copies of questionnaire the instrument was randomly distributed to members of selected group of the population. The result of the pilot helped in standerzing the instrument for the study. The reliability of the instrument was tested using split half method. In view of Akuezuil Agu (2004) this method involves, the summing up the scores on items on the questionnaire separately to a group of respondents. The split half reliability coefficient was determined correlating the scores of the items statement, by using peason product moment correlation coefficient (PPMCC) of 0.93 was obtained as the reliability of the instrument.

3.6.2 Reliability of the Instrument

Nnamdi (2001) defines reliability of the instrument as the consistency between independent measurements of the same phenomena. Reliability is the stability. Dependability and predictability is then, stability. In addition, reliability is concerned with the consistency in result given by the same instrument at all times. In order to determine the reliability of the instrument a pilot test was conducted. The reliability coefficient of the questionnaire was based on the statement of Mukerjee (1980) cited in Babatunde (1994) that "the requirements for internal consistency is that, the average value of the correlation coefficient must be pretty high around 0.80".This was at a significant level of 0.05.The instrument therefore was satisfactory. This is in line with Akeuzuilo's (1993) statement that a correlation of about seven and above could be said to be high.

3.6 Procedure for Data Collection

The researcher with two research assistants administered the instrument on the subjects at the respective institutions. The researcher used the on-the spot questionnaire administration technique. This was easier and the responses from the respondents were relatively high. Nwargu (1991) confirms that the percentage return of such questionnaire can sometimes be as high as one hundred percent.

3.7 Procedure for Data Analysis

The data collected from the various respondents in this research were analyzed and computed in form of tabulation, frequencies and percentages.

The respondents' opinions were scored under Available, Not Available, and No Idea, Maintain Not Maintain and No Idea. The frequency and percentage for each item in the instrument were computed and shown in tables in chapter four. Frequency and percentage distribution were used to show the respondents' opinions on a given item on the table. Analysis of variance (ANOVA) statistical tool was used to test the study hypotheses.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter focused on the analysis and discussion of data collected for this study. Opinions of management staff, Academic staff Non-Academic staff and students were presented. The chapter was divided into sections, namely, data presentation and analysis of the opinions in relation to the findings of the study.

In the analysis, a questionnaire was used in section 'B' of the questionnaire which was summed up into two categories with the same items and different variable. The two major variables are "availability" and "maintenance". In the availability, it carries "Available", "Not Available" and "No Idea", and "maintenance" carries "maintained", "Not maintained" and "No idea". The frequencies of responses were presented in tabular form to show opinions to describe to what degree the respondents' opinions expressed in the study. One hundred and ten items were presented for the questionnaire. Simple descriptive statistics was used to analyze the variables and various aspects of the respondents' opinions to show frequency and percentages. With the use of questionnaire, the responses were, "available," "not available" and "no idea", and "maintained", "not maintained", and "No idea".

Out of three hundred and thirty nine (339) copies of questionnaire distributed, only three hundred (300) were duly completed and returned. This constituted 88.5% of respondents that were involved in the first part of the study. The three hundred (300) were management staff, staff and students in tertiary institutions in Kaduna State.

4.2 Discussion on the Bio-Data of Respondents

This section presented and discussed respondents' bio-data in tables 4.2.1 – 4.2.2 on availability and maintenance respectively. Table 2.1 captured respondents' gender on

availability in frequency and percentages. Table 4.2.1 captured respondents' gender on availability of facilities in tertiary institutions in Kaduna state. The frequency and percentages of all were analyzed in tables 4.2.1 and 4.2.2

Table 4.2.1: Gender of Respondents on Availability of Facilities

Gender	Frequency	Percentage
Male	195	65
Female	105	35
Total	300	100

Table 4.2.1 showed that 195 respondents representing 65% were male while 105 respondents representing 35% were female. This means that male had the higher population among the respondents in this study.

Table 4.2.2: Gender of Respondents on Maintenance of Facilities

Gender	Maintenance	
	Frequency	Percentage
Male	195	65
Female	105	35
Total	300	100

Table 4.2.2 showed that 195 respondents representing 65% were male while 105 respondents representing 35% were female. This showed that males were more than the female in the population of the study.

Table 4.2.3: Status of Respondents: The table here captured respondents' status that is management staff, staff and students with their frequency and percentages from various sampled tertiary institutions in Kaduna state

Status	Frequency	Percentage
Management staff	70	23.3
Academic staff and Non-Academic staff	90	30
Students	140	46.7
Total	300	100

Table 4.2.3 gave account of the status of respondents. Out of 300 respondents twenty three point three percent with seventy respondents were management staff, while ninety respondents representing 30%, were Academic staff and Non-Academic staff and students had 140 respondents which is equivalent to 46.7% This indicated that students had more respondents than others in terms of percentages and frequencies. Table 4.2.4 showed status of respondents on maintenance in frequency and percentages.

Table 4.2.4: Status of Respondents on Maintenance of Facilities

Status	Frequency	Percentage
Management staff	70	23
Academic staff and Non-Academic staff	90	30
Students	140	47
Total	300	100

Table 4.2.4 showed the status, frequency and percentage of the respondents on the maintenance facilities. The respondents were categorized as management staff, academic staff and non-academic staff and students. The frequency for management staff is 70 respondents with 23%.Staff and students had 33.3% while 90 respondents with30% were staff and 140 respondents that is represented by 47% were students.

Table 4.2.5: Qualification of Respondents

Table 4.2.5 showed the qualification of the respondents on the availability and maintenance of facilities in tertiary institutions in Kaduna state.

Table 4.2.5: Qualification of Respondents on Availability of Facilities

Qualification	Frequency	Percentage
Ph.D	75	25
Masters	99	33
Degree	72	24
Diploma	30	10
Others	25	8

Total	300	100

Table 4.2.2 above represents the qualification of respondents. It shows that ninety nine respondents (33%) have masters, seventy five respondents (25%) have PhD, seventy two respondents (24%) have Degree, thirty respondents (10%) have Diploma and twenty five respondents (8%) there were others, i.e. either N.C.E, H.N.D respectively.

Table 4.2.6: Qualification of Respondents on Maintenance of Facilities

Qualification	Frequency	Percentage
PhD	75	25
Masters	99	33
Degree	72	24
Diploma	30	10
Others	25	8
Total	300	100

Table 4.2.4, shows that majority of the respondents represented by ninety-nine (33%) were Masters degree holders, while, seventy five respondents representing (25%) have PhD. Seventy two respondents representing (24%) have first Degree, while thirty respondents representing (10%) have Diploma, and twenty five respondents representing (8%) have other qualification like, N.C.E, HND, and Certificates.

Table 4.2.7: Opinions of Respondents According to institutions on Availability of Facilities

Institution	Frequency	Percentage
Shehu Idris Coll. Of Health Sci. and Tech, Makarfi	55	18
Kaduna State College of Education, Gidan Waya	70	24
Kaduna Polytechnic, Kaduna	75	25
Ahmadu Bello University, Zaria	100	33
Total	300	100

From the table 4.2.7. Ahmadu Bello University Zaria had one hundred respondents represented by [33%], Kaduna polytechnic, Kaduna had seventy five respondents represented by [25%], while Kaduna State College of Education, Gidan-Waya had seventy

respondents represented by [24%] and Shehu Idris College of Health Science and Techenology Makarfi had fifty five respondents represented by [18%] ,respectively.

With these figures it can seen that most of the respondents were well informed to perceive the need of evaluating the management of tertiary institutions facilities with the view of improving the standard of education.

Table 4.2.8: Opinions of Respondents According to Institutions on Maintenance of Facilities

Institution	Frequency	Percentage
Shehu Idris Coll. Of Health Sci. and Tech, Makarfi	55	18
Kaduna State College of Education, Gidan Waya	70	24
Kaduna Polytechnic	75	25
Ahmadu Bello University, Zaria	100	33
Total	300	100

Table 4.2.8 showed the frequencies and percentages of respondents from different institutions. For example Ahmadu Bello University, Zaria had one hundred respondents represented by (33%), Kaduna Polytechnic had seventy five respondents which represented by(25%),Kaduna State College of Education, Gidan Waya had seventy respondents represented by (24%) and Shehu Idris College of Science and technology Makarfi had fifty five respondents represented by (18%) reason for this selection was based on sized and type of institutions.

Table 4.2.9: Years of Experience of Respondents

Table 4.2.9 shows the years of experience, of the respondents presented in frequency and percentages of both availability and maintenance of facilities in tertiary institutions in Kaduna state.

Year in Experience	Frequency	Percentage
15 – 20 years	114	38
6 – 10 years	110	37
1 – 5 years	76	25

Total	300	100

Table 4.2.9.1 revealed that one hundred and fourteen represented by (38%) have years of experience ranging from 15-20 years, one hundred and ten represented by (37%) had 6 – 10 years of experience and seventy six represented by [25%] had 1-5 years of experience.

The analysis shows that, there were many experienced staff in the tertiary institutions. The 15- 20 years had the majority as shown by the table and the second one are those with 6-10 years of experience.

Table 4.2.9:1: Years of Respondents Experience on Maintenance of Facilities

Year in Experience	Frequency	Percentage
15 – 20 years	114	38
6 – 10 years	110	37
1 – 5 years	76	25
Total	300	100

Table 4.2.9:2 above shows that majority of respondents had15-20 years of experience representing of one hundred and fourteen respondents with (38%), respondents that had 6-10 years experience had one hundred and ten (37%) and respondents that had one to five years experience had seventy six represented by (25%). These demographic data, showed that the respondents were well informed to perceive the needs of assessing and evaluation of the availability and maintenance of facilities in tertiary institutions in Kaduna State with the view to improving the standard of education.

4.3 Opinions of Respondents on Availability and Maintenance of Learning Facilities in Tertiary Educational Institution in Kaduna state:

This section contained table 4.3.1-4.3.12. The tables captured serial number, item statement, facilities, Available, Non Available and No Idea, each with frequency and percentages. Likewise, maintenance carried items such as “maintained”, “Not maintained”, and “No Idea” each with frequencies and their percentages on the same item statements.

Table 4.3.1: Opinions of Respondents on Availability of Learning Facilities in Tertiary Educational Institutions in Kaduna State

S/No	Item Statement	Available		Not Available		No Idea	
1	Relevant books in the library	207	69%	56	19%	37	12%
2	White and black boards	239	80%	45	15%	16	5%
3	Chairs and tables	233	78%	57	19%	10	3%
4	Class ventilation	211	70%	69	23%	29	7%
5	E-book library	187	62%	83	28%	30	10%
6	Department library	182	61%	94	31%	24	8%
7	Adequate seats in library	188	63%	79	26%	33	11%
8	Adequate E-journal	149	50%	92	31%	59	20%
9	Still pictures	131	44%	91	30%	78	26%
10	Fanned boards	128	43%	93	31%	79	26%
11	Bulletin boards	165	55%	78	26%	57	19%

Table 4.3.1 is on availability of learning facilities. The table shows that item one on relevant books in the library has 69% with 207 frequency on available books in the library, while 18 percent with frequency 56 disagreed, 12 percent with a frequency of 37 had no idea. This shows that the relevant books were available in the library of tertiary institutions in Kaduna state. Since stakeholders in education inculcated adequate reading culture among students, there is the need for proper orientation and enlightenment for students on the availability of books for use in the library. Likewise on the second item and subsequent items majority of the respondents agreed that, there were available learning facilities white and black boards had 239 respondents representing80%, 15 percent were with no idea of available and only 16 respondents with 5 percent had no idea in this item. This shows clearly that white and black boards were available by looking at the total frequency and percentages of each respondent. In item three which solicited for the respondent's opinion on the availability of chairs and tables in the respective institutions, majority of the respondents agreed that chairs and tables were available in the institutions. This is seen as 239 with 80%. While 57 with 17 percent which disagreed that there were available chairs and tables, also

only 10 respondents with 3% had no idea on the availability of chairs and tables in tertiary institutions. Looking at the table critically one can conclude that majority of the respondents agreed that there were available learning facilities in institutions of higher learning in Kaduna state. Item statement four which sought for the opinions of the respondents on class ventilation, 211 of the respondents represented by 70 percent, agreed 69 respondents with 23 percent disagreed with the statement and only 20 respondents with 7 percent had no idea at all. Items five to eleven have similar opinion on the available of E-book library, Departmental library, adequate seats in library, adequate E-journal, still pictures, fanned boards, and bulletin boards. In this case majority of the respondents agreed that all these items were available because the high frequency and percentages.

The analysis of the data collected further showed that majority of the respondents agreed that, facilities were available in tertiary institutions in Kaduna state. Since the majority of the respondents agreed with the above statement, we expect great success in all ramifications in teaching and learning.

Table 4.3.2: Opinions of Respondents on Maintenance of Learning Facilities in Tertiary Educational Institutions in Kaduna State

S/N	Item Statement	Available		Not Available		No Idea	
1	Relevant books in the library	121	40%	153	51%	26	9%
2	White and black boards	108	36%	170	57%	22	7%
3	Chairs and tables	87	29%	180	60%	33	11%
4	Class ventilation	107	36%	174	58%	19	6%
5	E-book library	93	31%	174	58%	33	8%
6	Department library	89	30%	186	62%	25	2%
7	Adequate seats in library	114	38%	180	60%	6	17%
8	Adequate E-journal	81	27%	167	56%	52	15%
9	Still pictures	57	19%	198	66%	45	15%
10	Fanned boards	57	19%	198	66%	45	15%
11	Bulletin boards	63	21%	182	61%	55	18%

Table 4.3.2 above revealed that relevant books in the library were not maintained, as 51 percent of the respondents affirmed, while 40 percent were of the opinions that they were maintained, and 9 percent had no ideas at all. For a library to be considered as maintained and equipped with relevant books, it must have a sizeable collection of books and properly maintained. The contribution of a school library for effective teaching and learning cannot be over emphasized. It is indispensable in the process of teaching and learning and serving as a reading centre as well as a repository of information for both staff and students. The report showed that libraries in table 4.3.1 had available facilities and table 4.3.2 also showed that the libraries were maintained for effective usage for both students and staff in the respective tertiary institutions in Kaduna state.

Table 4.3.1 confirmed the availability of white and black boards in the respective institutions while table 4.3.2 indicated the numbers of respondents that agreed, to this statement, however, 170 of the respondents represented by 57 percent disagreed and stated that the libraries were not maintained, 108 respondents with 36 percents agreed that boards were adequately maintained, while 22 respondents with 7 percent did not have idea. However, some boards were depreciating in terms of quality and need change, for it usages. As observed during the research period, some boards were not even available in some

institutions. Other was not maintained for writing, as confirmed by 57 percents of the respondents.

Schools or tertiary institutions are dynamic system, there is need for constant supply of new and maintenance of chairs and tables for both staff and students. Due to the fact that it may be depreciating and in a state of disrepair.

Table 4.3.1 shows the percentage and frequency distribution of availability of chairs and tables in tertiary institutions. It showed that the furniture were available, and in table 4.3.2, it clearly shows that the furniture were not maintained, due to the fact that 180 respondents with 60 percent were with ideas that these chairs and tables were not maintained. While 87 respondents with 29 percent were with agreement that there was maintenance and only 33 respondents with 11 percent had no idea on the statement. This means that there were available chairs and tables in the tertiary institutions but there were not adequately maintained. While items four to eleven also maintained the same agreement that in table 4.3.1 majority agreed that there was class ventilation, E-book library, department library, adequate seats in the library, adequate E-journal, still pictures, fanned boards and bulletin boards likewise, in table 4.3.2 all agreed that there was poor maintenance of those items available. For instance, the skill pictures, fanned boards, bulletin board and others are commonly known as notice broads for displaying instructions, rule, currents notices, and other similar notices that may attract students and staff on rules and regulation concerning school activities were available.

Looking at the analysis, majority of the respondents were of the opinion that, there were facilities in the tertiary institutions but those facilities were not maintained and if the facilities that make teaching and learning effective are not maintained there will many problems in the process of teaching and learning.

4.4 Opinions of Respondents on the Availability and Maintenance of Teaching Facilities in Tertiary Educational Institutions in Kaduna State

The table captured serial number from 12-26, item statement, availability of teaching facilities', available, not available, and no idea each with frequency and percentages.

Likewise table 4.4.2 carried the same thing but only bearing maintenance, with maintained, not maintained and no idea.

Table 4.4.1: Opinions of Respondent on Availability of Teaching Facilities in the Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Available		Not Available		No Idea	
		F	%	F	%	F	%
1	Laboratory equipment	183	61	86	29	31	10
2	Projectors	146	49	89	30	65	21
3	Camera pictures	121	40	114	38	65	22
4	Television set(s)	151	50	102	34	47	16
5	Posters	166	55	82	27	52	18
6	Slides	137	46	85	28	78	26
7	Radio set(s)	148	49	103	35	49	19
8	Buses for excursion	166	55	84	28	50	17
9	Public address system	162	54	92	31	46	15
10	Computer	184	61	80	27	36	12
11	Community resources	146	49	93	31	59	20
12	Tape recorders	140	47	92	31	68	22
13	Globes/word maps	155	52	91	30	54	18
14	Diagrams room	155	52	89	30	56	18
15	Stationary	153	51	83	28	64	21

Table 4.4.1 showed a total agreement on the part of respondents that most of the items were available. Item twelve which was laboratory equipment 183 of the respondents represented by 61 percent, agreed that there was available laboratory equipment while 86 respondents represented by 29 percent disagreed whether there is available laboratory equipment and 31of the respondents with 10 percent had no idea on the statement. Looking at this distribution there was available laboratory equipment because majority of the respondents confirmed it.

In item thirteen which sought to find out the availability or otherwise of teaching facilities in tertiary institutions in Kaduna state, from the table it can be deduced that majority of the respondents agreed that, there was available laboratory equipment because it had high number of respondents as 146 with 49 percent while 89 respondents with 30 percent disagreed with the statement and only 65 respondents with 21.7 percent had no idea in the matter, therefore in the tertiary institutions there was enough laboratory equipment by this numbers of respondents it is the only mechanism that enables students to pass

examination and become competent and effective at the end of their study or programme. Looking at the table carefully one can see that majority of the respondent agreed on, items fourteen to twenty six agreed that there were availability of those items such as camera pictures, television sets, posters, slides. Radio set, buses for excursion, public recorders, globes word maps, diagrams room and stationery. Teaching and learning in tertiary institutions learning cannot be effective without the above mentioned items. But based on the frequency and total number of percentages, majority of the respondents agreed that the items above were adequate and availability as seen in the analysis. However, the analysis in the table further explained that the items were only available but not maintained.

Table 4.4.2: Opinions of Respondents on Maintenance of Teaching Facilities in the Tertiary Educational Institutions in Kaduna State

S/N	Item Statement	Maintained		Not Maintained		No Idea	
		F	%	F	%	F	%
1	Laboratory equipment	86	29	178	59	36	12
2	Projectors	83	28	182	61	35	11
3	Camera pictures	62	21	180	60	58	19
4	Television set(s)	63	21	179	60	55	18
5	Posters	77	26	174	58	49	16
6	Slides	84	28	187	62	29	10
7	Radio set(s)	76	25	180	60	44	15
8	Buses for excursion	68	23	205	68	27	9
9	Public address system	65	22	166	55	69	23
10	Computer	92	31	166	55	42	14
11	Community resources	89	30	174	58	37	12
12	Tape recorders	82	27	189	63	29	10
13	Globes/word maps	95	32	140	47	65	21
14	Diagrams room	91	30	177	59	32	11
15	Stationary	59	20	213	71	28	9

The table 4.4.2 showed the opinions of respondents on maintenance of teaching facilities in tertiary institutions in Kaduna State. This is clearly seen in the table above by the high percentage scores of the items 59 percent as against 29 percent and 12 percent the impression created by this result showed that laboratory equipment were not adequately provided for teaching and learning in the tertiary institutions, there is the tendency that the

learners will not achieve great results. The table 4.4.1 showed availability of projectors. In table 4.4.2 clearly showed that projector were not maintained due to the fact that, 182 respondents with 61 percent carried the highest percentage of not maintaining the projectors, while 83 respondents with 28 percent were of the opinion that, there was adequate maintenance of projectors, and 35 respondents with 12 percentage had no idea on the statement. This implies that generally, projectors were available in the various institutions and at the same time there were not maintained due to lack of constant electricity, maintenance culture and other reasons that led to the neglect of few ones that were available. From the table above you can deduce that most of the items that were available in table 4.4.1 at the same time in table 4.4.2 reflected poor maintenance. Thus, television sets, camera pictures, posters, sliders, radio sets, buses for excursion, public address system, computer, community resources, public address system, computer, community resources, tape recorders, globes, diagrams room and stationery were poorly maintained. However, it clearly shows that these items were not maintained at all. While, these teaching facilities are indispensible in terms of teaching and learning without them effective teaching for good product cannot exist at all, therefore, educational planners and manager suppose to take note of these indispensible items in the process of teaching and learning process.

4.5 Opinions of Respondents on Availability and Maintenance of Health Facilities in Tertiary Educational Institutions in Kaduna State.

This section captured the availability and maintenance of health facilities considered essential for effective teaching and learning in tertiary institutions in Kaduna state. These are listed from items 27 to 47 in the table 4.5.1 and subsequently frequency and percentage of each “available”, not “available” and “no idea”. Likewise, maintenance carried “maintained”, “not maintained”, and no Idea each with frequency and percentages on the same items statement.

Table 4.5.1: Opinions of Respondents on Availability of Health Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Available		Not Available		No Idea	
		F	%	F	%	F	%
1	First aid boxes	167	56	78	26	55	18
2	Incinerators/refuse dump	174	58	77	26	49	16
3	Long book for daily routine of illness	165	55	74	25	61	20
4	Beds (in-patients, delivery maternity)	169	56	81	27	50	17
5	Oxygen facilities	125	42	107	36	68	22
6	Blood transfusion services	138	46	91	30	71	24
7	Injection and sterilization	169	56	72	24	59	20
8	HIV antibody testing	156	52	88	29	56	19
9	Insecticide treated bed net	135	45	99	33	66	22
10	T.B diagnosis, microscopy malaria diagnosis	126	42	106	35	68	23
11	X-ray machine	141	47	90	30	69	23
12	Operating	142	47	98	33	60	20
13	Ambulance	186	62	71	24	43	14
14	Adult weight scale	177	59	73	24	50	17
15	Thermometers	195	65	65	22	40	13
16	Medical doctors rooms	194	64	61	20	45	15
17	Nursing assistant/Nursing aid	188	63	70	23	42	14
18	Measles vaccine	158	53	80	27	62	20
19	Brochures, posters or others materials on safe sex practices	157	53	85	28	58	19
20	Short wave radio	153	51	90	30	57	19
21	School clinic or sick-bay	186	62	71	28	43	14

Table 4.5.1 presents the percentage and distribution of respondents' opinions, with their corresponding frequencies. As shown in the table, in item twenty seven which was on first aid boxes are available with 167 respondents with 56 percent, 78 respondents with 26 percent disagreed with the statement and 55 respondents with 18 percent had no idea at all. In the second item 174 respondents (58 percent) had the highest frequency and percentage among the respondents which agreed that there was availability of the refuse dump in the various tertiary institutions while 77 respondents (26 percent) of the respondents were on the opinion that refuse places were not available and 49 respondents (16 percent) had no idea on the matter? Item 29 which was log book for the daily routine of illness received more responses. For instance, 165 respondents (55 percent) agreed that there was adequate and

availability of daily routine illness in the respective institutions, while 74 respondents (24 percent) were of the opinion that there was no available daily routine for illness in tertiary institutions in Kaduna state and about 61 respondents (21 percent) had no idea on the matter. 169 respondents with (56 percent) agreed that there was available bed (for maternity delivery) while 81 respondents with (27 percent) did not agreed with the statement and 50 respondents (17 percent] had no idea on the statement. 125 respondents (5 percent) agreed that there was adequate and available oxygen facilities, while 107 respondents (36 percent) disagreed with the statement and 68 respondents 68 respondents (23 percent) had no idea on the item statement. For blood transfusion services, 138 respondents (46 percent) agreed that there was availability of those items. According to the rating of HIV antibody testing, insecticide treated bed net, T.B diagnosis, microscope malaria diagnosis, x-ray machines operating, ambulance, adult weight scale, thermometers, medical doctors room, nursing assistant, brochures others materials on safer sex practices, short wave radio and school clinic or sick-bay. They all agreed that they were available.

Therefore most of the respondents concluded and agreed that there was availability of all of the items mentioned above. But the question here is how often are these items are available and maintained in the various respective institutions in Kaduna state? The school managers and educational planners could plan and provide for all these items.

Table 4.5.2: Opinions of Respondents on Maintenance of Health Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Maintain		Not Maintain		No Idea	
		F	%	F	%	F	%
1	First aid boxes	84	28	174	58	42	14
2	Incinerators/refuse places	79	26	179	60	42	14
3	Long book for daily routine of illness	90	30	189	63	21	7
4	Beds (in-patients, delivery maternity)	92	31	187	62	21	7
5	Oxygen facilities	80	27	174	58	46	15
6	Blood transfusion services	87	29	173	58	40	13
7	Injection and sterilization	91	30	165	55	44	15
8	HIV antibody testing	63	21	198	66	39	13

9	Insecticide treated bed net	85	28	169	57	46	15
10	T.B diagnosis, microscopy malaria diagnosis	73	24	184	62	43	14
11	X-ray machine	106	35	160	54	34	11
12	Operating	94	31	171	57	35	12
13	Ambulance	80	27	194	65	26	8
14	Adult weight scale	101	34	149	50	50	16
15	Thermometers	101	34	163	54	36	12
16	Medical doctors rooms	90	30	169	56	41	14
17	Nursing assistant/Nursing aid	84	28	172	57	44	15
18	Measles vaccine	97	32	179	60	24	8
19	Brochures, posters or others materials on safe sex practices	103	34	172	58	25	8
20	Short wave radio	81	27	185	62	34	11
21	School clinic or sick-bay	69	23	190	63	41	14

Table 4.5.2 shows that first aid boxes were not maintained for the fact that 174 respondents (58 percent) agreed that there was availability of first aid boxes but they were not maintained, while 84 respondents (28 percents) agreed that there was adequate maintenance of the first aid boxes in the respective institutions and about 42 respondents (14 percent) had no idea on the item statement., likewise on item twenty eight, 179 of the respondents (60 percent) agreed that there was poor maintenance of refuse places for environmental hygiene, while 79 respondents (26 percent) concluded that there is maintenance of refuse places and 42 respondents had no idea in responding to the questionnaire in the respective institution of learning on item twenty nine which said that there was no maintenance of long book for daily routine of illness, the responses were 189 respondents (63 percent) agreed with the poor maintenance, while 90 respondents (30 percents) agreed that there was proper maintenance of the available of refuse places and only 21 respondents had no idea at all. From items thirty (30) to forty seven (47) other all the respondents agreed that there was no maintenance of items such as bed (in-patients, delivery maternity), oxygen facilities, blood transfusion services, injection and sterilization. HIV antibody testing, insecticide-treated bed net, T.B diagnosis, microscopy malaise diagnosis, x-ray machine, operating, ambulance, adult weight scale, thermometers, medical doctors

rooms, nursing assistant measles vaccine, brochures, posters, other materials on safer sex practices, short wave radio and school clinic or sick-bay. All the respondents agreed that there was no maintenance of these items in the various institutions in Kaduna state.

There must be facilities for improving general health and for this reason health for students and staff supposes to be maintained by providing available medical health facilities for teaching and learning to take place without any jeopardy, but lack of maintaining health facilities in the respective institutions will lead to outbreak of diseases among students and staff, like dyreacolaier, and other insecticide diseases due to poor construction of drainage, lack of enough ventilation in the hostel accommodation.

4.6 Opinions of Respondents on Availability and Maintenance of Sport Facilities in Tertiary Educational Institutions in Kaduna State.

Table 4.6.1 carries respondents" opinions serial number, item statement, availability of the item statement, and the second table on the maintenance of the same item statement, each with frequencies and percentages.

Table 4.6.1: Opinion of Respondents on Availability of Sport Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Available		Not Available		No Idea	
		F	%	F	%	F	%
1	Standard football field	200	67	64	21	36	12
2	Standard basketball field	198	66	62	21	40	13
3	Standard volley ball field	187	62	74	25	39	13
4	Standard swimming pull	148	49	108	36	44	15
5	Games coaches	171	57	76	25	53	18
6	Tables tennis equipment	191	64	65	22	44	14
7	First aid equipment	179	60	62	21	59	19
8	Long jump and high jump take off	160	53	84	28	56	19
9	Boards official	158	53	79	26	63	21
10	Hammer throwing circles	137	46	91	30	72	24
11	Multi-purpose field with synthetic floor	140	47	92	31	68	22
12	Athlete dressing rooms	135	45	93	31	72	24
13	Technical rooms	147	49	81	27	72	24
14	Store room	171	57	74	25	55	18
15	Ware house	154	51	78	26	68	23
16	Ticket office	141	47	93	31	66	22
17	Wire-net fencing	142	48	100	33	58	19

18	Bath rooms	160	53	78	26	62	21
19	Press room	144	48	105	35	51	17
20	Spectators	158	53	84	28	58	19
21	Referee dressing rooms	135	45	93	31	72	24

Table 4.6.1 gave the analysis of what institutions management should do, to provide facilities.200 respondents (67 percent) agreed that there was adequate standard football field in the various institutions, while 64 respondents (21 percent) disagreed with the statement as about 36 respondents with 12 percent had no idea on the statement on item forty nine which said that standard basket ball field was adequately available, and then about 198 respondents agreed with the statement with 66 percent and at the same time 62 respondents (21 percent) disputed the statement, that there was no available standard basket ball field and 40 respondents (13 percent) had no idea whether there was available basket ball field.

In item fifty, on standard volley ball field, 187 respondents (62 percent) agreed that there was bad ball field in their respective tertiary institutions, while, 74 respondents with 25 percent disagreed that, there was no available volley ball field and 39 respondents (13 percent) had no idea on the statement. Looking at these three statements on availability, shows that most of the institutions have standard field for football, volley ball and basket ball according to respondents' opinions. In the same table and on item fifty one which was standard swimming pull, about 148 respondents agreed with 49 percent that there was available swimming pull, while 108 respondents with 36 percent disagreed with the statement, that there was no available standard swimming pull in tertiary institutions in Kaduna state, and 44 respondents with 15 respondents had no idea on the statement.

In the same vein, in item fifty two which said that game coaches under these item statement 171 respondents (57 percent) agreed that there were available game coaches in various tertiary institutions in Kaduna state. While, 76 respondents disputed the opinion that, they were not available game coaches in tertiary institutions in Kaduna state, and 53 respondents (18 percent) had no idea on the item statement.

According to the rating of table tennis equipment, first aid equipment, long jump and high jump take off, boards officials, hammer throwing circle, multi-purpose field with synthetic floor, athlete dressing rooms, technical rooms, store room, ware house, ticket office, wire-net fencing, bathrooms, press room respectively all the respondents agreed that they were availability of these sport facilities in tertiary institutions in Kaduna state. This analysis generally showed that tertiary institution were the ones responsible for ensuring that all necessary facilities were provided through close supervision, as the case of above table majority agreed that, adequate. Sport facilities were available in tertiary institutions in Kaduna state.

4.6 Opinions of Respondents on Maintenance of Sport Facilities in Tertiary Educational Institutions in Kaduna State.

This section is on the availability and maintenance of sport facilities which basically analyzed the maintenance of sport facilities in tertiary institutions in Kaduna state. In the table there are item statements such as, "Maintained", "Not Maintained", and No Idea. Table 4.6.2 shows details of the result.

Table 4.6.2: Opinions of Respondents on Maintenance of Sport Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Maintain		Not Maintain		No Idea	
		F	%	F	%	F	%
1	Standard football field	71	24	193	64	36	12
2	Standard basketball field	80	27	181	60	39	13
3	Standard volley ball field	72	24	178	59	50	17
4	Standard swimming pull	89	30	178	59	33	11
5	Games coaches	84	28	189	63	27	9
6	Tables tennis equipment	69	23	191	64	40	13
7	First aid equipment	86	29	164	55	50	16
8	Long jump and high jump take off	113	37	146	49	41	14
9	Boards official	119	39	158	53	23	8
10	Hammer throwing circles	94	31	179	60	27	9
11	Multi-purpose field with synthetic floor	81	27	197	66	22	7
12	Athlete dressing rooms	68	23	199	66	33	11
13	Technical rooms	65	22	208	69	27	9
14	Store room	57	19	207	69	36	12
15	Ware house	63	21	177	59	60	20
16	Ticket office	87	29	174	58	39	13
17	Wire-net fencing	77	26	177	59	46	15
18	Bath rooms	74	25	192	64	34	11
19	Press room	67	22	178	60	55	18
20	Spectators	67	22	191	64	42	14
21	Referee dressing rooms	74	25	177	59	49	16

This assessment shows that most of the respondents‘ were of the opinions that almost all sport facilities that were available in the first table were not maintained, for instance in item forty-eight which is standard football field, 193 respondents with 64 percent disagreed, the field for football were not maintained by the tertiary institutions management, while 71 respondents with 24 percent agreed that there was adequate management of the football field and 36 respondents with 12 percent had no idea. By looking at the total number of respondents who agreed that there was no proper maintenance of the sport or football field in tertiary institutions in Kaduna state, so the management and government should make effort to the upgrade maintenance of sport field to encourage sport most especially football, for health and exchange of friendship among other institutions in the country. The subsequently item which said that standard basket ball field, under item 181 respondents with 60 percent agreed also there was no maintenance of basket ball field, while 80

respondents with 27 percent agreed and supported that there was maintenance of the field and 39 respondents with 13 percent had no idea entirely, looking at the analysis of the item it clearly showed that no there was no maintenance of the basket ball field in the respective tertiary institutions in Kaduna state, so institutions management should make it workable and attractive to encourage basket ball field. In item fifty which was on, standard swimming pull, the opinions of the respondents were calculated. 178 respondents agreed that, there was no maintenance of the swimming pool, while 89 respondents with 30 percent agreed that, there was good maintenance of the swimming pool in tertiary institution in Kaduna state and only 33 respondents did not say anything (no idea at all). Number of the respondent who was the majority agreed that there was no maintenance of the swimming pool and sports in tertiary institutions. Sport committee or department should take notice of providing necessary available sport facilities and the available ones should be maintained.

According to the table item fifty two was on game coaches, 189 respondents with 65 percent had no idea of maintenance of those coaches while, 84 respondents agreed that there was good maintenance of the coaches and 27 respondents with 9 percent had no idea on this statement. This means that coaches in tertiary institutions were not maintained, because the frequency and percentages showed clearly that there was no maintenance either from government side or management of the institution.

By looking at the rating analysis of item fifty three (53) which is on table tennis equipment, first aid equipment, long jump and high jump take off, board, hammer throwing circle, multi-purpose field with synthetic floor, referee dressing rooms, technical rooms, store room, ware house, ticket office, wire-net fencing. Bath rooms, press room and spectators' room. They all agreed that there were no maintenance of these sport facilities at all, the analysis showed the majority opinion based on lack of maintenance of these sports

facilities, therefore, in the first table majority agreed that they were available but in the second table majority were agreed that they were not maintained at all.

This assessment showed that all items or facilities to be need serviced, repaired, overhauled as a way of maintaining them. This can affect the quality of education in the tertiary institutions in the state.

4.7 Opinions of Respondents on Availability and Maintenance of Welfare Facilities in Tertiary Educational Institutions in Kaduna State.

The table 4.7.1 analyzed the opinions of respondents on “available”, “not available”, “no idea” on the item statements presented and the second table also drew and analyzed the opinions of respondents on “maintained”, “not maintained”, and “no idea”.

Table 4.7.1: Opinions of Respondents on Availability of Welfare Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Available		Not Available		No Idea	
		F	%	F	%	F	%
1	Staff toilet with in offices	197	65	69	23	36	12
2	Students toilet at hostel and around classes	196	66	73	24	31	10
3	Vehicles for local transport	171	57	87	29	42	14
4	Resting room with enough seat for staff	166	55	87	29	47	16
5	Break period for staff and students	178	60	76	25	46	15
6	Adequate water supply within school and quarters for staff	195	65	79	26	26	9
7	Security service at places within school premises	196	65	72	24	32	11
8	Health insurance services	182	61	82	27	36	12
9	Washing detergent	158	53	100	33	42	14
10	Dormitories shops	172	57	80	27	48	16
11	Cafeteria	185	62	80	26	35	12
12	Drugs in clinic	192	64	74	25	34	11

Table 4.7.1 above revealed the frequency distribution of availability of welfare facilities, which majority agreed that there were available welfare facilities, for instance, from item sixty nine which was on staff toilet within offices. 195 respondents with 65 percent agreed that, staff toilets were available while, 69 respondents with 23 percent disagreed that staff toilets were not available within staff offices and 36 respondents with 12 percent had no idea. Looking at majority opinion one can conclude that most of the staff has a toilet in their various offices.

In the subsequent item which says that students toilets in the hostel accommodation and around classes were available, looking at the number of respondents that agreed, for example 196 respondents (66 percent) agreed with the statement while 73 respondents (24 percent) did not agreed there were available toilets in students hostel accommodation and around their classes and only 31 respondents (10 percent) had no idea on the entire statement. In item seventy one which was on vehicles for local transport, so in these item 171 respondents (57 percent) agreed that there were available vehicles for local transport

within the tertiary institutions in Kaduna state, while 87 respondents (29 percent) were with the opinions that there were no vehicles for local transport in the respective tertiary institutions in Kaduna state and only 42 respondents 14 percent had no idea in the item. Mathematically the number of respondents that agreed with the statement was the majority. To conclude this analysis, opinions showed that there were available vehicles for local transport in these tertiary institutions, and this will motivate the students and staff to move freely from within the institution to other areas outside the institution and also it will reduce insecurity problems that will affect the students and staff within.

According to the rating of item seventy two which was on resting room with enough seat for staff, 166 55 percent agreed that there were available resting rooms with enough seat facilities for staff while, 87 respondents (29 percent) disagreed with the statement, therefore, there were no enough seat facilities in the resting rooms of staff in the tertiary institution, and 47 respondents (16 percent) had no idea. This means that if staffs have enough resting room will it saved as means of motivation and encouragement to them.

Item seventy three was on break period for staff and students, in the opinion of the respondents 178 agreed (60 percent), while, 76 respondents (25 percent) disagreed with the statement and 46 respondents (15percent) had no idea at all. This showed that tertiary institutions in Kaduna state provided a break period for staff and students to rest and refresh their brain, and any work without break can create discouragement and boredom. Rating of item statements from seventy four to eighty was on, adequate water supply within school and staff quarters for staff, security services at all places within school premises, health insurance services, washing detergent, dormitories shops, cafeteria, drugs in the clinic. Majority of respondents agreed that, they were available in the respective tertiary institutions in Kaduna state. This analysis showed that majority agreed and very few disagreed and very

few had no idea. Table 4.7.2 carries serial number, item statement, maintained, not maintained and no idea, simple calculation was used to present frequency and percentage.

Table 4.7.2: Opinions of Respondents on Maintenance of Welfare Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Maintain		Not Maintain		No idea	
		F	%	F	%	F	%
1	Staff toilet with in offices	68	23	195	65	37	12
2	Students toilet at hostel and around classes	63	21	208	69	29	10
3	Vehicles for local transport	73	24	197	66	30	10
4	Resting room with enough seat for staff	90	30	182	61	28	9
5	Break period for staff and students	78	26	190	63	32	11
6	Adequate water supply within school and quarters for staff	80	27	165	55	55	18
7	Security service at places within school premises	67	22	187	63	46	15
8	Health insurance services	61	20	213	71	26	9
9	Washing detergent	80	27	188	63	32	10
10	Dormitories shops	78	26	205	68	17	6
11	Cafeteria	86	29	179	60	35	11
12	Drugs in clinic	79	26	189	63	32	11

Table 4.7.2 gave an in depth insight of the analysis. 195 respondents representing 65 percents disagreed that staff toilet within offices were not maintained, where as 68 respondents representing 23 percent agreed and 37 respondents representing 12 percent had no idea. This showed that staff toilet within offices were not maintained. It is not enough to only prevent disease in the tertiary institution there must be facilities to improving general health and hygiene. On Students toilet in the hostel and around classes, the total respondents clearly indicated that the toilets for students were not maintained. 208 respondents representing 70 percent agreed that there was no maintenance of student's toilet at hostel and around their classes, while 63 respondents representing 21 percent agreed, and 29 respondents representing 10 percent had no idea. This showed the degree of frequency with which tertiary institutions apply non-challant attitudes in maintaining toilet facilities for students and staff.

The frequency of agreement on items 4.7.2 showed that the respondents agreed that vehicles for local transport were not maintained. This is clearly seen in the table by the high

percentage scores on the item on vehicles for local transport 197 frequency representing 66 percent agreed that there was no maintenance while 73 representing 24 percent there were of the opinion that they were maintenance only 30 respondents representing 10 percent in the tertiary institution had no idea on the statement. The problem was further aggravated by the fact that quite often; educational planners do not relate vehicles for local transport to the teaching and learning process within the tertiary institution in Kaduna state.

On item seventy two on resting room with enough seats for staff. According to the responses of the respondents on the table, 182 respondents representing 61 percent were of the opinion that there was no maintenance of the resting room for the staff while 90 respondents representing 30 percent agreed that there was proper maintenance of the resting room with enough seat for the staff and 28 respondents representing 9 percent had no idea on the item statement. This implied that generally, resting room for staff with enough facilities even though in the first table were available but in table two they were not maintained. This has confirmed the report of Waziri (1999) that most tertiary institutions in Kaduna state staff were lacking resting rooms and no maintenance of the few ones. The assessment calls for a critical look on the tertiary institution for improving the situation at stake.

On item seventy three which is break period for staff and students, the opinion of the majority of the respondents confirmed that there was no room for break period for staff and student during lecture time for instance, 190 respondents representing 63 percent agreed that there is no consistence in maintaining this period while, 78 respondents representing 26 percent agreed with the statement. That there was break period for both staff and students in various respective tertiary institutions in Kaduna state and about 32 respondents representing 11 percent had no idea at all on the statement. This analysis showed that in the tertiary

institutions in Kaduna state they should create time for break for both staff members and students so that churching all the time within the working hour will not be continuous.

In item seventy four which was on adequate water supply within school and staff quarters. The table showed that majority agreed that there was no maintenance of the water supply in the school premises and staff quarters also for instance, in the table frequency of the respondents showed, 165 respondents representing 55 percent agreed that there was no maintenance of water in the schools and staff quarters, while 80 respondents representing 27 percent agreed that there was adequate supply of water within the institutions premises and staff quarters and 55 respondents representing 18 percent had no idea at all. The analysis was for both availability and maintenance. In the first table i.e. for the availability, opinions showed it was available but in the second table it was not maintained. Due to result observed in the table. The therefore educational planners, managers and stake holders must put water supply into consideration within, the school premises and staff quarters for proper clearness and environment sanitation because lack of water supply will contribute so many problems either failure in laboratory practical and other important functions.

In item seventy five which was security services at all places within school premises, the table showed that the greater number of the respondents, about 187 representing 63 percent agreed that there was no maintenance of the security services within the institutions premises, while 67 of the respondents (22 percent) disagreed and 46 represented 15 percent had no idea. By looking at this analysis, one can deduce that the security services were not maintained. This percentage is significant, and state government and federal government should endeavor to do something positive in order to provide all necessary security. In general, dormitories shops were available in the institutions as said earlier; but dilapidated in terms of maintenance.

The table also showed that cafeteria within the school premises. About 179 respondents representing 60 percent agreed that there was no maintenance of school cafeteria, while 86 respondents representing 39 percent agreed that, there was adequate maintenance of school cafeteria and 35 respondents representing 12 percent had no idea at all on the statement. The tertiary institution environment of learning cannot be said to be pleasurable and fully happy with inadequate cafeteria where food can be bought and served. This implies that the school students might wonder away from the school in search for food and even cook at the hostels accommodation, it can causes outbreak of fire within hostel and school in general. Lack of enough cafeterias in this regard can lead to truancy.

In item seventy eight which was drugs in clinic, to only prevent diseases and injury in the school system. There must be facilities for improving general health and for this reason clinics should be maintained. Proper construction, sunlight and frequent cleaning, with sufficient drugs are the factors to consider.

Table 4.7.2. gave an in depth insight of the analysis, as 189 respondents that representing 63 percent disagreed that there was no maintenance of drugs in clinic, while 79 respondents representing 26 percent agreed that there was proper maintenance of drugs in the clinic and 32 respondents representing 11 percent had no idea at all. In conclusion drugs in clinic were not adequately provided.

4.8 Opinions of Respondents on Availability and Maintenance of infrastructural Facilities in Tertiary Institutions in Kaduna State.

The table 4.8.1. Captured the serial number, item statement “Available”, “Not available” and “No idea” each with frequency and percentage the second table also captured similar item with serial number and carried maintenance as “Maintained”, “Not Maintained” and “No idea”.

Table 4.8.1: Opinions of Respondents on Availability of infrastructural Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Available		Not Available		No Idea	
		F	%	F	%	F	%
1	Lecture hall	198	66	74	25	28	9
2	Hostel accommodation	196	65	74	25	30	10
3	Staff quarters	199	67	70	23	31	10
4	Laboratories	193	64	74	25	33	11
5	Workshops	192	64	69	23	39	13
6	Apparatus for practical	189	63	70	23	41	14
7	Workshops facilities	174	58	81	27	45	15
8	Building of classes	181	60	84	28	35	12
9	Staff offices	197	66	71	24	32	10
10	Administrative blocks	200	67	65	22	35	11
11	Power supply	189	63	73	24	38	13
12	Water supply	179	60	80	27	41	13
13	Audition room	174	58	64	21	62	21
14	Gymnasium	157	52	74	25	69	23
15	Lobby	148	49	80	27	72	24
16	Stair cases	160	53	77	26	63	21
17	Kitchen	168	56	86	29	46	15
18	Common room for students	170	57	74	25	56	18
19	Mechanical writing (Leroy)	170	57	80	27	50	16
20	Machines	183	61	76	25	41	14
21	Guidance & counseling office	174	58	64	21	62	21
22	Corridors	184	61	68	23	48	16
23	I.C.T. Unit	184	61	65	22	51	17
24	Typist room	181	60	72	24	47	16
25	Flowers/shrubby	187	62	60	20	53	18
26	Routing duty	190	63	63	21	47	16
27	Parking areas	200	67	66	22	34	11
28	Generator set (s)	182	61	74	25	44	14
29	Assembly halls	179	60	78	26	43	14
30	Engines	187	62	78	26	35	12

In item eighty one which sought to find out the availability of lecture hall, the assessment indicated that generally lecture hall were available as can be seen from table 4.8.1. 198 respondents, represented 66 percent agreed that there were lecture halls while, 74 respondents that representing 25 percent disagreed with the statement and 28 respondents representing 9 percent had no idea. Even though not all institutions have enough available lecture halls for their students, it is important to note that adequate lecture halls in school will improve the morale of students and staff.

In item eighty two which attempted to find out the availability of hostel accommodation. The type of hostel accommodation that was available will reflect the type of community and their interest in providing quality education for their children. 196 respondents represented 65 percent agreed that there was hostel accommodation, while 74 respondents represent 25 percents disagreed with available hostel accommodation within the various tertiary institutions in Kaduna state and about 30 respondents representing 10 percent had no idea. Hostel accommodation was available according to respondent's opinion in the various institutions. However, one should not rule out that broken windows doors bed and bed condition of the accommodation. Furthermore, the researcher observed that there was available land for most of the institutions but there was few available accommodation for students, prevent individual should come at and build hostel accommodation in a minimal price and rich individuals to assist in donating hostel accommodation.

Item eighty three is on staff quarters. The table showed that 199 respondents representing 67 percent agreed that there were available tertiary institutions, while 70 respondents that representing 23 percent disagreed with the statement that they were no available staff quarters and 31 respondents represented by 10 percent had no idea at all.

A dedicated and hard working staff will find the job quite rewarding if he or she lives near the institutions or even living within school promises. Trekking long distances or spending a lot of money on renting a house and transportation can reduce productivity of the staff in a situation where he or she has no decent house to live in and desire to live outside. As said earlier, some of these houses were available but dilapidated and not habitable. A good and strong building needs care, renovation and maintenance if it is inhabitable for long.

Item eighty four is on laboratories. The table showed the total numbers of respondents and their percentages which analyzed as thus 193 respondents representing 64 percent strongly agreed that there were available laboratories in the tertiary institutions, while 74 respondents

representing 30 percent disagreed and 33 respondents representing 11 percent had no idea. For science courses to be sufficient and effective there must be enough facilities of good quality education.

The fact is that, the availability of laboratories which supposed to be suitable to accommodate the various activities that would be carried out, cannot be over emphasized. The facilities should be properly managed by the students.

From the respondents' point of view as shown in table 4.8.1, it could be seen that on workshops, apparatus for practical and workshops facilities majority agreed that they were availability of these facilities. This implies that workshops, apparatus for practical and workshop facilities were available but insufficient. Thus complete workshops facilities, apparatus for practical and workshops facilities can enhance learning, whereas lack of it can bring high rate of failure in the different courses.

In item eighty eight which is on building of classes, majority agreed they were available classes for instance, 181 respondents representing 60 percent agreed that there were available classes, while 84 respondents representing 28 percent disagreed that they were not available, by 35 respondents representing 12 percent. Looking at this analysis majority agreed that there were availability of classes for students and staff to carry out their activities for effective teaching and learning in the respective institutions in Kaduna state. A survey of the classes building in the various institutions showed that the item was adequate but not necessarily in good shape. This is because management and maintenance of classes building is a determining factor to its life span.

In item eighty nine, which was on staff offices the analyses showed that 197 respondents representing 66 percent agreed that there were adequate available staff offices while, 71 respondents representing 24 percent disagreed, and 32 respondents representing 11 percent had no idea on this item statement. However, the researcher observed overcrowding

in most of the staff offices, most especially junior staff were packed into one office designated for one or two staff in some cases with no seats for some of the staff to sit on and other facilities that make the office attractive and comfortable for the staff.

In the same table on item ninety which was on administrative blocks, showed clearly the responses on the administrative blocks, the higher percentage and frequency that answered agreed. The result here showed that the blocks were attractive and contained all the necessary materials and furniture conducive for the officers to carry out their work effectively. It should be understood however that 200 respondents representing 67 percent agreed with the above statement that there were adequate available administrative blocks. This disputed the ideas of those who disagreed that there were no available and attractive administrative blocks and 35 respondents representing 11 percent had no idea at all on the item statement. This means that there are still offices that do not contain the necessary materials. The building might even be dilapidated and small for the purposes they are meant for.

Item ninety one is on power supply, it is essential, that the school system consists of the basic system and structures which a viable school or tertiary institution needs in order to function effectively and to fulfill the purposes for which it was established. Looking at the responses of the respondents and frequency and percentages, the analysis is quite encouraging. As the distribution was done much faired in terms of distribution. The highest frequency of the respondents is 189 respondents representing 63 percent agreed that there was available power supply in the respective tertiary institution in Kaduna state, while, 73 respondents representing 24 percent disagreed with the statement entirely, and 38 respondents representing 13 percent had no idea at all. Despite the fact that there is poor supply of power in most of the town and cities in the state but within the tertiary institutions, there is power supply to the students and staff and even research in general. This will

facilitate learning if the Power Holding Company (PHC) equipment is in optimum working conditions.

Item ninety two was water supply; water and power are moving hand in hand toward the development of individual and society at large. Water supply infrastructure such as public water supply extension to the tertiary institutions, boreholes, or deep wells, water tanks and other means of supplying water are essential to the institutions not only institutions, life of individual in general. These are essentially needed by every individual and tertiary institution in order to function effectively and to fulfill the purpose for which the institution was established. Moreover, some few numbers of the institutions were lacking these basic needs, while the majority of the institution may have it available. As pointed clearly in table 4.9.1, the greater number of the respondents agreed that water supply was available. The analysis showed 179 respondents representing 60 percent agreed with the statement, while 80 respondents representing 27 percent disagreed, and 41 respondents representing 13 percent had no idea at all.

In item ninety three was on auditorium room. From the table 174 respondents representing 58 percent agreed that there was available auditorium room in the various respective institutions. While, 64 respondents representing 21 percent disagreed with the statement entirely and 62 respondents representing 21 percent had no idea. Looking at this simple analysis one can conclude by saying that there was available auditorium room but almost half of the respondents had no idea at all. Due to the the importance attached to the use of auditorium room, a critical look at it, will mean a setback to some of our educational programmes. The relevance and value of auditorium to tertiary institutions cannot be measured as far as the needs of the individual students in the school are concerned; some co-curricular activities are acquired only by the use of auditorium.

Item ninety eight which on common room for students, the number of responses showed that 170 respondents (57%) agreed that there was available common room for students while, 74 respondents (25%) disagreed with the statement and 56 respondents (18%) had no idea in responding to this item.

The provision of common rooms in tertiary institutions is to promote social relaxation and to encourage students to meet for extra-curricular activities during which they learn the spirit of cooperation, unity and citizenship. It thus assists the intellectual, social and emotional development of the students. Where such facilities are not available it means that the importance of the common room cannot be realized in the school system. Availability or lack of such facilities has implication on the health of the learners and consequently on the overall school goals and objectives.

On item ninety nine one hundred of the respondents agreed with the availability and very few by saying not available and no ideas like, 170 respondents (57%) while 80 respondents (26%) and 50 respondents (16%) and 183 respondents (61%), while 76 respondents (25%) and 41 respondents (14%) respectively.

Item one hundred and one is on guidance/counseling office. Counseling or guidance offices were built in the middle of a building in most tertiary institution as observed during the research period. In some institutions the rooms were available in a separate block. Usually, the counseling offices are strategically located to make students feel free when over they go for counseling. They are supposed to be well constructed and furnished and attractive for counseling purposes. Table 4.8.1 indicated the availability of the counseling offices. Majority of the respondents constituting 174 respondents (58%) agreed that there were available counseling offices while, 64 respondents (21%) disagreed by saying they were not available, and 62 respondents (21%) had no idea in regards to the statement. More

likely, the young ones as discussed with some respondents in the tertiary institutions were well adjusted as they receive useful counseling on general matters.

Item one hundred and three was on I.C.T unit. In any tertiary institutions today in Nigeria they should be well connected with enough information and communication technology facilities in order to be the same with other institutions in the world i.e. provide with internet facilities for easy exchange of information, the respondents responded positively on with I.C.T unit. For example, 181 respondents (61%) agreed with available I.C.T unit, while 65 respondents (23%) disagreed with the statement and 51 (17%) have no idea at all on the availability of I.C.T unit facilities in tertiary institution in Kaduna state.

Item one hundred and five was on flower/shrubs. In rating scale of the table, 187 respondents (62%) agreed there were available flowers or shrubs while 60 respondents (20%) disagreed with the statement and 53 respondents (18%) had no idea. The practice of beautifying the school surrounding with flowers, hedges and landscaping is supposed to be seen in most of the schools nowadays. To enhance teaching and learning, managing and decorating the schools or tertiary institutions with flowers serves as a form of aesthetic training for students and staff. Such as the ability to appreciate good things and live in a beautiful surrounding. A clean and beautiful school environment gives rise to purer thoughts and clean deeds which retain the students to live in the institutions, not only that the outsiders that like and love to be in the institutions because of the cleanness and beauty of the environment.

Items one hundred and six to one hundred and ten stated are on, routing duties, parking area, generators (sets) assembly hall and engines. Majority responded that there were no available of these items in various respective tertiary institutions.

The researcher observed that some institutions were not using the facilities effectively due to some of the excuses. Table 4:8.2: shows the maintenance of infrastructural facilities. There

carry serial number, item statement and “maintained”, “not maintained” and “No Idea” and all with frequency and percentages of each.

4.8.2: Opinions of Respondents on Maintenance of infrastructural Facilities in Tertiary Educational Institutions in Kaduna State.

S/N	Item Statement	Maintained		Not Maintained		No Idea	
		F	%	F	%	F	%
1	Lecture hall	100	33	161	54	39	13
2	Hostel accommodation	89	30	169	56	42	14
3	Staff quarters	77	26	205	68	18	6
4	Laboratories	84	28	202	67	14	5
5	Workshops	93	31	195	65	12	4
6	Apparatus for practical	91	30	182	61	27	9
7	Workshops facilities	118	39	162	54	20	7
8	Building of classes	92	31	174	58	34	11
9	Staff offices	96	32	172	57	32	11
10	Administrative blocks	91	30	183	61	26	9
11	Power supply	95	32	178	59	27	9
12	Water supply	97	32	163	55	40	13
13	Audition room	81	27	182	61	37	12
14	Gymnasium	82	27	188	63	30	10
15	Lobby	64	21	200	67	36	12
16	Stair cases	70	23	191	64	39	13
17	Kitchen	72	24	197	66	31	10
18	Common room for students	67	22	203	68	30	10
19	Mechanical writing (Leroy)	70	23	190	64	40	13
20	Guidance & counseling office	69	23	186	62	45	15
21	Corridors	85	28	176	59	39	13
22	I.C.T. Unit	76	25	172	58	52	17
23	Typist room	81	27	199	66	20	7
24	Flowers/shrubby	56	19	205	68	39	13
25	Routing duty	64	21	206	69	30	10
26	Parking areas	71	24	203	68	26	8
27	Generator set (s)	73	24	196	66	31	10
28	Assembly halls	78	26	190	63	32	11
29	Machines	63	21	206	69	31	10
30	Engines	58	19	201	67	41	14

Item eighty one on the maintenance of lecture hall indicated that they were not maintained due to the fact that majority of the respondents responded positively that almost all the lecture hall were not maintained. They were available but they not adequately maintained based on these analysis. One hundred and sixty-one (161) respondents (54%) agreed that lecture halls were not maintained, while 100 (33%) disagreed that lecture halls were maintained and 39 respondents (13%) had no idea on the item statement. So by looking at this analysis critically in table 4.8.1 lecture halls were available and in the second table

they were not maintained and if lecture halls are not maintained, aims and objectives of the institutions been established would not be achieved, because teaching and learning will take place and even researches would not be carried out.

Item eighty two was on hostel accommodation. As early stated that no society or community will like to provide quality education when hostel accommodation is poor or not maintained at all. The percentages of respondents on hostel accommodation showed that they were not maintained for instance, 169 respondents (56.%) agreed with the statement, while 89 respondents (30%) disagreed that hostel accommodation were well maintained and 42 respondents (14%) had no idea. For critical analysis of the item statement tertiary institution have enough land for building more accommodations and maintained the ones they have for environmental hygiene and cleanness within the tertiary institution.

Item eighty three which is on staff quarters, the table shows clearly that majority of the respondents, were of the opinion that there was no maintenance of staff quarters in the tertiary institutions of Kaduna state. According to the table 205 respondents (68 %) agreed that there was no maintenance of staff quarters in the tertiary institutions. While, 77 respondents (25%) disagreed with the statement and 18 respondents (6%) had no idea.

As already indicated in the table, the houses may be available but in a dilapidated situation, even if in use. If such is the case, it means that teaching generally can be demoralizing as there is no good accommodation for staff. The second issue was that most of these available staff quarters were not adequately maintained due to lack of funds. Buildings in some tertiary institutions were either uncompleted or completed but for many years remained ragged and dilapidated.

According to the result in the table under item eighty four which is on laboratories, 202 respondents (68%) agreed that laboratories are not maintained while 84 respondents (28%) disagreed, and 14 respondents (14%) had no idea. According to the analysis, most of

the laboratories in the various tertiary institutions in Kaduna state were not maintained, and quality of science education depends immensely to laboratories facilities so hence they are not maintained, science courses would suffer a lot of problems or not even carry out, at the end of day, the science laboratories will be not sufficient without the necessarily equipment and chemicals for experiments.

Items eighty five to eighty seven are on workshops, apparatus for practical and workshops facilities. The above indicated that 195 respondents (65%), agreed that they were not maintained, while 93 respondents (31%) disagreed with the statement and 12 respondents (5%) did not have idea at all, 162 respondents (54%) agreed that there was poor maintenance of workshop facilities, while 118 (39%) disagreed with the statement and 20 (7%) had no idea at all. The analysis showed that workshops apparatus for practical and workshops facilities were generally available in different tertiary institutions, even though frequently used, if the materials or facilities' are not there, the students will not achieve great success. By looking at this result all the respondents were of the opinion that workshops apparatus were not maintained so therefore, educational objective or goals cannot be achieved.

Item eighty eight which was on building of classes. Out of the total respondent majority expressed their opinions that building and classes were not maintained, for instance, 174 respondents (58%) agreed with that statements, while 92 respondents (31%) disagreed with the statement that they were well maintained and 34 (11%) have no idea at all. The essential tools designed to facilitate and stimulate the educational programmes are the classes, but despite the fact the government and non-governmental organizations are building more classes but they are not maintained. Based on the responses of the respondents. In the first table of the availability majority agreed that they were available but maintained.

In item eighty nine which was on staff offices, the responses showed that staff offices were not maintained due to frequency and percentage. For instance, 172 respondents (57%) agreed that the staff offices were not maintained in the respective tertiary institutions in Kaduna state. While, 96 respondents (32%) disagreed that staff office were well maintained and 32 respondents (10%) had no idea at all on the item statement.

The staff offices are ideal and supposed to be furnishes with all necessary equipment and would make the office attractive and comfortable. For example, these facilities supposed to be in any staff office, enough seats, cupboard, and fan, privacy for personal programmed, toilet, carpet, and fridge. However, some of the above mentioned facilities were not available and maintained in the staff offices, as the majority opinions affirmed.

In item ninety the responses showed that majority agreed that Administrative blocks of the tertiary institution were not maintained for example 183 respondents (61%) agreed that administrative blocks were not maintained, while, 91 (30%) disagreed with the statement that they were well maintained. The Administrative blocs is important place where all necessary records and files of different categories are often kept in the administrative block., it revealed that the administrative blocks were not maintained with necessary facilities. Although, majority said so, one should not rule out the fact that some of the offices were maintained as observed by the researcher during the administration of the questionnaire in the various tertiary institutions in Kaduna state.

In item ninety one which was power supply. The tertiary institutions consisted the basic system and structures which institutions need in order to function effectively and to fulfill the purposes for which they were established for students to learning, and staff to make effective research with the use of power supply. But looking at the frequency and percentages it clearly shows that majority disconfirmed that power supply was not maintained. For example, 178 respondents (59%) confirmed that it was not being maintained

while 95 respondents (32%) agreed that there is adequate maintenance of power supply and 27 respondents (9%) had no idea.

The power supply has a lot of advantages to students and staff, but rather, the tertiary institutions mostly use generators that supply power hours by hours at items and not to the entire school. If that is the case, the power supply was not well managed and maintained in different tertiary institutions in Kaduna state.

Item ninety two which was on water supply, apart from power supply and next important facilities that make institution to perform effectively and efficiently is water, because water is life wire and the backbone of life of human and non human in terms of research and studies. In general this water supply can be boreholes, deep wells, water tanks, and so on. However, some tertiary institutions were lacking these facilities as one of the basic needs, while some few ones have in their school. For example, 163 respondents (55%) agreed that water supply was not maintained, while 97 respondents (32%) disagreed with the statement and 40 respondents (13%) did not have idea on the item statement. This indicated that water supply in the various tertiary institutions in Kaduna sate was not maintained at all.

Item ninety three was on auditorium room. Form the table auditorium room was well maintained with 182 respondents (61%) agreed with the above statement. While, 81 respondents (27%) disagreed that auditorium room is maintained and 37 respondents (12%) had no idea in the above statement. So due to the essential functions attached to the use of an auditorium room, a critical look at lack of it being maintained. It will be a setback to some tertiary institutions and their educational programmes. The importance and uses of auditorium cannot over emphasize to the individual and school in general; some co-curricular activities are acquired through the use of auditorium.

Items ninety four to ninety seven were gymnasium, lobby, stair cases, and kitchen. Majority of the respondents agreed that there were not maintained for example gymnasium

182 (61%), lobby 200 (67%), stair cases 191 (64%), kitchen 197 (66%). Looking at the table closely, it was noticed that the frequency distribution showed that the tertiary institutions were not maintained.

Item ninety eight, which was on common room for students. The provision of common rooms in tertiary institutions was to promote social relaxation and to encourage students to meet extra-curricular activities to learn the spirit of cooperation, unity and citizenship. It thus assists the intellectual, social and emotional development of the students.

The table revealed that the analysis of respondents by frequency count common room, 203 respondents (68%) being the higher counters indicated that common rooms were not maintained in their institutions as against 67 respondents (22%) who affirmed that they were maintained. And 30 respondents (10%) had no idea at all. When such facilities are not maintained, it means that the importance of the common room as stated above cannot be realized in the tertiary institution system. Lacks of these facilities has implication on the health of the students and even affect the goals and objectives.

Item one hundred which stated that Guidance and Counseling offices, are strategically located to make students feel free whenever they go for counseling. They are supposed to be well constructed and furnished, comfortable and attractive for counseling purposes. The table rating indicated that these offices were not maintained. Majority of the respondents constituting 186 respondents (62%) agreed that counseling offices were not maintained, while 69 respondents (23%) agreed that counseling offices were adequately maintained and 45 respondents (15%) had no idea. This means that institutions should have proper counseling for the youths. Consequently, during sharing of questionnaire the researcher discussed with some respondents in their institutions they were not even counseled on most matters affecting either academically, socially, and even emotionally problems.

Item one hundred and two was on I.C.T unit. It described higher frequency distribution of I.C.T unit, facilities which showed that this item was not well maintained due to respondent's opinions. 173 respondents (58%) agreed that I.C.T unit facilities in tertiary institution were not being maintained while, 76 (25%) disputed with statement and 52 respondents (17%) did not have an idea on the statement. Due to importance of I.C.T unit to the students and staff, the major goals of the institutions are to use the facilities in helping the students to discover their talents and eventually develop their challenges, without the facilities being adequate and maintained such goals are not easily realized.

Item 104 one hundred and four which stated that, flowers/shrubs, the table above showed clearly that the frequency and percentages of respondents agreed that the flowers were not maintained, for example 205 respondents (68%) agreed with above statement while, 56 respondents (19%) did not agreed that flower are well maintained in the tertiary institution of learning. And 39 respondents (13%) had no idea. Their practice of beautifying the institutions surrounding with flowers, hedges, and landscaping were supposed to be seen in most of the institutions. For effective teaching and learning, managing and decorating the institutions with flowers sever as a form of aesthetic training for students and even the staff. Even though, shrubs and flowers are relevant to the institutions according to majority opinions, it is unfortunate that many institutions were not beautified and maintained by 205 (68%) of the respondents.

In conclusion, item one hundred and five to one hundred and ten which included routing duty, parking areas, generator sets, assembly halls, machines and engines. Majority of the respondents agreed that, they were not maintained while very few were of the view that they were maintained by institutions management Tables are on tables 4.3.1 to 4.7 2.

4.9 Hypothesis Testing.

In this section six hypothesis were formulated on availability of facilities in tertiary institutions in Kaduna state. The hypothesis include there is no significant difference in the opinion of management staff, academic staff and non-academic staff and students on availability of learning facilities in tertiary institutions in Kaduna state, there is no significant difference in the opinion of management staff, academic staff and non-academic staff and students on availability of teaching facilities in tertiary institutions in Kaduna state, there is no significant difference in the opinion of management staff, academic staff non-academic staff and students on availability of welfare service facilities in tertiary institutions in Kaduna State, availability of sport facilities, availability of health facilities and lastly there is no significant t difference in the opinion of management staff, academic staff and non-academic staff and students on the availability of Infrastructural facilities in tertiary institutions on Kaduna state. Detail of the hypothesis is contained in tables' 4.3.1-4.3.6.

Analysis of variance (ANOVA) was used to test the hypothesis. The level of significance used for the study was 0.05, therefore, hypothesis was rejected with the p.value >0.0.5 level of significance.

4.9.1 Hypothesis one

H01 There is no significant difference in the opinion of management staff, academic staff and non-academic staff and students on the availability of learning facilities in tertiary institutions in Kaduna state.

The data collected in respect of items 1-11 in the questionnaire were used to solicit the opinions of respondents on the availability of learning facilities. The results were presented in table 4.3.1.

Table 4.9.1: Analysis of Variance (ANOVA) on the opinion of respondent on the availability of learning facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of Squares	DF	Mean of square	F	p.value	T.critical
Between groups	1298.62	3	490.811			

Within groups	1612.415	297	5.429	5.58	0.00	3.0
Total	14594.037	300				

Table 4.3.1 showed that, the calculated F-ratio value (5.5.80) at 297 DF 3 and the level of 0.05. The critical value (3.00) is less than F-ratio vale (5.580) and observed level of significance p (.000) is less than 0.05. This means that there was a significant difference in the opinion of management staff, academic staff and non-academic staff and students on availability of learning facilities in tertiary institutions in Kaduna state. Therefore, the null hypothesis was rejected.

Table 4.9.2: Analysis of variance (ANOVA) on the opinion of respondents on the maintenance of learning facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F	p.value	T.critical value
Between groups	9015.494	3	507.747			
Within groups	4367.422	297	14.7052	6.543	0.000	3.00
Total	13382.917	300				

Table 4.3.2 showed that the calculated F-ratio value (6.543) at 297 DF 3 and the level of 0.05. The critical value (3.00) is less than F-ratio value (6.543) and observed level of significant difference between the opinions of management staff, staffs and students on the maintenance of learning facilities in tertiary institutions in Kaduna state. Therefore the null hypothesis was rejected. Looking at the two tables of learning facilities, the institutions manager and planners should not only provide these facilities but should also be maintaining them.

4.10.2 Hypothesis Two

H02 There is no significant difference in the opinion of management staff, academic staff and non-academic staff and students on the availability of teaching facilities in tertiary institutions in Kaduna state. The data collected in the questionnaire were in items 12-26; which solicited the opinions of the respondents on the availability of teaching facilities the

analysis of variance (ANOVA) was used to analyze the responses. The results were presented in table 4.4.1

Table 4.10.1: Analysis of variance (ANOVA) of opinions of respondents on the availability of teaching facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	33022.848	3	511.424			
Within groups	2921.348	297	9.836	8.640	0.00	3.0
Total	35944.197	300				

Table above 4.4.1, showed that the responses on the items in table 4.4.1 revealed calculated F-ratio value (8.640) at 297 DF 3 and the level of 0.05 this meant that, there was a significant difference in the opinions of management staff, academic staff and non-academic staff and students on the availability of teaching facilities in tertiary institutions in Kaduna state. Therefore the null hypothesis was rejected.

Table 4.10.2: Analysis of variance (ANOVA) on the opinions of respondents on the maintenance of teaching facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	12047.400	3	623.700			
Within groups	7486.187	297	25.206	38.979	0.000	3.00
Total	19533.587	300				

Table 4.4.2 which analyzed the opinion of respondents on maintenance of teaching facilities showed that the calculated F-value (38.979) at 297 DF 3 and the level of 0.05 the critical value (3.00) is less than F-ratio value (38.979) and observed level of significance P (.000) is less than 0.05. This meant that, there was significance between the opinion of management staff, academic staff and non-academic staff and students on maintenance of teaching facilities in tertiary institution in Kaduna state, Therefore the null hypothesis was rejected. The institutions manager needs to build on maintenance culture in terms of teaching facilities because this strongly indicated that all teaching facilities were not maintained.

4.11 Hypothesis Three

To test hypothesis 3, which stated that there is no significant difference in the opinions of management staff, academic staff and non-academic staff and students on the availability and maintenance of health facilities in tertiary institutions in Kaduna state? The opinions of the respondents on the item 27-47 related to the hypothesis were Table 4.5.1 and 4.5.2 present the details of the result using analysis of variance (ANOVA) to test the hypothesis.

Table 4.11.1: Analysis of variance (ANOVA) on the opinions of respondents on the availability of health facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	15180.394	3	9590.197			
Within groups	4590.043	297	15.455	9.126	0.000	3.00
Total	19770.437	300				

P.value <0.05 significant value exists.

Table 4.5.1 showed that the calculated F-ratio value (3.00) is less than F-ratio value (9.126) and observed level of significance P (.000) is less than 0.05. This meant that there was a significant difference in the opinion of the management staff, academic staff and non-academic staff and students on the availability of health facilities in tertiary institutions in Kaduna state. Therefore the null hypothesis was rejected.

Table 4.11.2: Analysis of variance (ANOVA) on the opinions of respondents on the maintenance of healthy facilities in the tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	29947.962	3	973.981			
Within groups	15778.235	297	53.125	81.861	0.000	3.00
Total	45726.197	300				

From table 4.5.2; the calculated F-ratio value (81.861) at 297 DF 3 and level of 0.05. The critical value (3.00) is less than F-ratio (81.861) and observed level of significance p (0.000) is less than 0.05. This meant that there is a significance P (0.000) is less than 0.05. This meant that there was a significant difference between the opinions of management staff, staff and students on the opinion of management staff, academic staff and non-academic staff and students on the maintenance of health facilities in Kaduna state, with that, the null hypothesis was rejected. Based on this, it clear that health facilities in the respective tertiary institutions were not maintained.

4.12 Hypothesis Four

H04 There is no significant difference in the opinions of management staff, staff and students on the availability and maintenance of sport facilities in the tertiary educational institutions in Kaduna state.

The data under this section were collected in the questionnaire from item s 48-68.

Table 4.12.1: Analysis of variance (ANOVA) on the opinions respondents on the Availability of sport facilities in tertiary Educational institutions in Kaduna state and results were presented in table 4.5.1.

Table 4.12.1

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	595324.863	3	4.002			
Within groups	9412.053	297	31.690	3.00	0.00	3.0
Total	1731.965	3.00				

P< 0.05 significant difference exist.

An examination of the table 4.5.1 above showed that the calculated F-ratio (4.002) at 297 DF 3 and the level of 0.05. The critical value (3.00) is less than F-ratio values (4.002) and observed level of significance P (0.000) is less than 0.05. This means that there is a significant difference in the opinions of management staff, academic staff and non-academic staffs and students on the availability of sport facilities in tertiary in Kaduna state. Therefore the hypothesis was rejected.

Table 4.12.2: Analysis of variance (ANOVA) on the opinions of respondents on maintenance of sports facilities in tertiary Educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	7526.427	3	763.213			
Within groups	5777.240	297	19.452	91.462	0.000	3.00
Total	13303.667	300				

P<0.05 the significant difference is exist.

Table 4.5.2 showed that the calculated F-ratio value (91.462) at 297 DF 3 and the level of 0.05. The critical value (3.00) is less than F-ratio value (91.462) and observed level of significance P (0.000) is less than 0.05. This meant that there was a significant difference between the opinions of management staff, academic staff and non-academic staff and students on maintenance of sports facilities in tertiary institutions in Kaduna state. Therefore, the null hypothesis was rejected. This means there was poor maintenance culture in the various tertiary institutions in Kaduna state.

4.13 Hypothesis Five

H05 There is no significant difference in the opinions of management staff, staff and student on availability of welfare services facilities in tertiary educational institutions in Kaduna state.

The Data under this segment were collected in the questionnaire from items 69-80 which enable the respondents to respond fully on welfare services facilities. Analysis of Variance (ANOVA) was used to test the hypothesis in question and the results were presented in table 4.13.1 and 4.13.2 respectively below.

Table 4.13.1: Analyses of Variance (ANOVA) on the opinion of respondents on availability of welfare service facilities in tertiary educational institutions in Kaduna state.

Sources of variance	**Sum of squares**	**DF**	**Mean square**	**F.value**	**P.value**	**T.critical Value**
Between groups	39002.848	3	561.487			
Within groups	2708.693	297	9120	8.279	0.000	3.00
Total	41711.667	300				

P<0.05 significant difference exists

Table 4.6.1 showed that, the calculated F-ratio value (8.279) at 297 and the level of 0.05. The critical value (8.279) at 297 and the value (8.279) and observed level of significant difference in the opinions of management staff, academic staff and non-academic staff and students on availability of welfare service facilities in tertiary educational institutions in Kaduna state. Therefore the null hypothesis was rejected.

Table 4.13.2: Analysis of variance (ANOVA) on the opinion of respondents on maintenance of welfare service facilities in the tertiary educational institutions in Kaduna state.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	7526.427	3	765.621			
Within groups	5777.240	297	19452	82.35	0.000	3.00
Total	13303.667	300				

P<0.05 significant difference exist

Table 4.6.2 showed that, the calculated F-ratio value (82.35) at 297 DF 3 and level 0.05. The critical value (3.00) is less than F-ratio value (82.35) and observable level of significance P (0.000) is less than 0.05. This meant that there was significant difference between the opinion of management staff, academic staff and non-academic staff and students on the maintenance of welfare service facilities in tertiary educational institutions in Kaduna state. Therefore, the null hypothesis was rejected.

4.14 HYPOTHESIS Six

H06 There is no significant difference in the opinions of management staff, academic staff and non-academic staff and students tertiary on availability and maintenance of infrastructural facilities in educational institution Kaduna state.

The data collected in respect of items 81-110 in the questionnaire were used in seeking the opinions of the respondents on availability and maintenance of infrastructural facilities.

Table 4.14.1: Analysis of variance (ANOVA) on the opinions respondents on Availability of infrastructural facilities in tertiary educational institutions in Kaduna state. The results were presented in table 4.14.1 below.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	43301.427	3	650.714			
Within groups	3661.493	297	12.328	156.186	0.000	3.00
Total	46962.920	300				

P<0.05significant difference exist

Table 4.7.1 showed that, the calculated f-ration value (6.186) at 297df 3 and the level of 0.05. The critical value (3.00)is less than f-ration value(6.186)and observed level of significance p(.000) is less than 0.05. This means that, there was significant difference in the opinions of management staff, academic and non-academic staff and students on the availability of infrastructural facilities in tertiary institutions in Kaduna state. Based on that, the null hypothesis was rejected. This result showed that there were availability infrastructural facilities in the tertiary institutions in Kaduna state but researcher observed during the research that, some of these facilities were not available and some were in dilapidated conditions, others need replacement.

Table 4.14.2: Analysis of Variance (ANOVA) on the opinions of respondents on maintenance of infrastructural facilities in tertiaryeducational institutions in Kaduna State.

Sources of variance	Sum of squares	DF	Mean square	F.value	P.value	T.critical Value
Between groups	28894.752	3	447.376			
Within groups	19027.394	297	64.065	25.510	0.000	3.00
Total	47922.092	300				

From table 4.7.2 the calculated f.ration value (25.510) at 297 df 3 and the level of 0.05. The critical value (3.00) is less than f.ration value (25.510) and observed level of significance p (0.000) is less than 0.05. This means that, there was significance difference in the opinions of management staff, academic staff and non-academic staff and students on maintenance of infrastructural facilities in tertiary educational institutions in Kaduna State. Therefore the null hypothesis was rejected.

Table 4.15 Summary of Hypotheses Testing

Hypothesis	Statistical test used	Significance level	Result
1	ANOVA	0.05	Rejected
2	ANOVA	0.05	Rejected
3	ANOVA	0.05	Rejected
4	ANOVA	0.05	Rejected
5	ANOVA	0.05	Rejected
6	ANOVA	0.05	Rejected

The table above clearly indicated that, all hypotheses were rejected and the result could be interpreted to mean the following:

1. There was significant difference in the opinions of management staff, staff and students on availability and maintenance of learning facilities in tertiary institutions in Kaduna State.
2. There was significant difference in the opinions of management staff, staff and students on teaching facilities in tertiary institutions in Kaduna State.

3. There was significant difference in the opinions management staff, staff and students on availability and maintenance of welfare facilities in tertiary institutions in Kaduna State.
4. There was significant difference in the opinions management staff, staff and students on availability and maintenance of sport facilities in tertiary institutions in Kaduna State.
5. There was significant difference in the opinions management staff, staff and students on availability and maintenance of health facilities in tertiary institutions in Kaduna State.
6. There was significant difference in the opinions management staff, staff and students on availability and maintenance of infrastructural facilities in tertiary institutions in Kaduna State.

4.8 **Major Findings**

The study revealed that:

1. Learning facilities were available but outdated
2. Teaching facilities and equipment were available but not properly maintained.
3. The available welfare facilities were not adequate and the few available ones were not properly maintained.
4. The available sport facilities were not properly put into use.
5. The available health facilities were not properly maintained.
6. The infrastructural facilities were available and not properly maintained.

4.9 Discussion of Findings

The findings of the study are as follows:

1. The research objective number one was to; examine the availability and maintenance of learning facilities in tertiary institutions in Kaduna State. The finding revealed that about 60 -69 percents of the facilities such as relevant books in the library, white and black boards, chairs and tables, E- book library, departmental library and adequate seats in the library were available, while the others were not available which constituted about 30-49 percents. Moreover, the opinions of the majority of the respondents showed that the learning facilities, teaching facilities were available in the institutions, but the facilities were dilapidated and, outdated and some were not available at all. Other facilities that need renovation, these include staff quarters, classroom, student's hostels, while others that need total replacement include chairs and tables, bulletin boards, television sets, tape recorders as observed by the researcher during the period of the research.
2. Objective number two assessed the availability and maintenance of teaching facilities in tertiary institutions in Kaduna state. The finding shows that most of the respondents revealed that teaching facilities were available with about 70-80 percents in areas such as Science laboratory equipment, public address system, stationary, projectors, computers and posters were available to accommodate the various activities for teaching and learning. The point here is that 90 percents of the teaching facilities such as laboratory equipment, projectors, radio sets, buses for excursion public address system tape recorder and diagrams most especially the life span were not being maintained by the institutional managements.

There was agreement among the respondents that facilities such as adequate seats in the library, buses for excursion, workshops facilities and apparatus for practical were

available but not effectively functioning. This could be attributed to poor maintenance of facilities, as the results indicated. In table 4.4.1 in chapter four 70% -80% showed availability of those facilities, but in table 4.4.2 in the same chapter 80% showed that they were not maintained.

The study showed that the institutions' facilities were available but some were not available based on the respondents' opinions. The findings further indicated that the facilities were not enough, as shown in table 4.4.2 which indicated that 80% of the respondents agreed that facilities were maintained by institutions managers.

3. In objective three examined the availability and maintenance of health facilities in tertiary institutions in Kaduna State. There was agreement in respondents' opinions that health facilities such as first aid boxes, daily routine of illness, blood transfusion services, HIV antibody testing, malaria a diagnosis was available but were not put in to use. Based on the respondents analysis that showed clearly all these health facilities were available but were not maintained in accordance with normal condition that suppose to be. Looking at the table 4.5.1 majority of respondents agreed that there were available of health facilities (70%), but in the subsequent table 4.5.2 the statement changed entirely, 80% of the respondents agreed that facilities mention above were not maintained.
4. Objective four assessed the availability and maintenance of sport facilities in tertiary institutions in Kaduna State. The findings revealed that sport facilities in the tertiary institutions were available with about 80% as indicated in table 4.6.1. But table 4.6.2 showed that 89% of the respondents agreed that the facilities were not properly maintained. The sport facilities include, football field, basket ball field, swimming pool, tennis equipment, store room, technical room dressing rooms to mention but a few.

5. In terms of welfare service facilities the findings showed that, most of the facilities were available but were not maintainaned. These welfare service facilities include staff toilet, students' toilet at hostel and around classes, water supply within school and staff quarters, security services at all places, drugs in clinic. In the same vein, maintenance of these welfare services were not maintained.

6. Findings on research objective number six were to identify availability and maintenance of infrastructural facilities in tertiary institutions in Kaduna State. The infrastructural facilities that was available in chapter four in table 4.7.1 which 75% agreed with it. The respondents' opinions indicated that some of these facilities were not well maintained as it could be seen in table 4.7.2. The example of these facilities are lecture halls, hostel accommodation, staff quarters, building of classes, staff offices, power supply, common room for students, and other facilities are not maintained promptly and such can constitute hazard to the students and even staff in the institutions.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the summary, Conclusions and recommendations were presented. The suggestions and recommendations were drawn according to the research findings. The main objective of the research was to evaluate the availability and maintenance of teaching facilities in tertiary institutions in Kaduna State. The aim was to asses facilities availability or otherwise, maintained or otherwise and no idea on the later mentioned. This assisted in clarifying position of the availability and maintenance of facilities in tertiary institutions in Kaduna State.

5.2 Summary

The main objective of the study was to evaluate and identify availability and maintenance of facilities in teaching and learning in tertiary institution in Kaduna state. The study assed the availability of school facilities such as learning facilities, teaching facilities, welfare services facilities, sport facilities, health facilities and infrastructural facilities in school and how it is maintained. The research assessed the opinion of tertiary institutions management staff, staff (academic and non-academic staff) and students were sought on availability and maintenance of teaching and learning facilities. The research had six objectives, research questions and basic assumptions. Abraham Maslow's, theory of motivation was used and related to the study. Literature were reviewed on learning facilities, some of the stressed the need to provide and maintained the learning facilities in the institutions for enhancing effective teaching and learning by both staff (academic and non-academic staff) and students. Second part the reviewed was on teaching facilities which have the same role in term of enhancing teaching and learning process. The third and fourth part

focused on the availability and maintenance of welfare services, sport and health facilities and lastly infrastructural facilities.

Furthermore the research methodology used in conducting the research. It consists of research design, population, sample sampling procedure, research instrument, reliability and validity of the instruments, pilot test, administration of instrument, and methods of data analysis.

In addition the findings and discussion of the data and result. Tables were presented to establish relationship between the variables under study. Frequencies and percentages were used to obtain results. A simple statistical analysis was used in result presentation of the research.

A questionnaire was designed and used for the collection of data for the study. The population of the study was 346 and an institution which was selected was given accordingly for management staff, staff and students. The data collected was statistically analyzed by using simple frequency and percentages method. Lastly chapter five comprises the summary, conclusion and recommendation all the topic of the study.

5.3 Conclusions

The research sought to find out the Evaluation of Availability and Maintenance of Facilities in Tertiary Institutions in Kaduna state. The responses of the three categories of respondents were collected to determine the availability and maintenance of facilities in tertiary institutions. It was found that facilities have been described as an effective tool for educational development in general. The study concludes as follow:

The result of the findings of the study revealed that learning facilities are available, however, some of these available facilities are not maintained and some are not available an important modern strategy and techniques of maintenance is required for effective teaching and learning.

The tertiary institutions management or heads to ensure that serious mechanism and effort its suppose to be employed and use to check all types of teaching facilities that are needed in school. Because 90% of the respondents agreed that teaching facilities are in the lapidated condition.

The teaching facilities that need proper attention base on the respondents opinion are adequate seat in the library, buses for execution, workshops apparatus for practical they need proper maintenance for effective teaching and learning.

It could be concluded that health facilities are available but need absolutes maintenance because 80% of the respondents were of the opinion that health facilities are been maintained.

In the aspect of sport facilities, most of respondents conclude by agreeing with available of some this facilities but on the other way round it's not been maintained by the institutional managers due to agreement with most of the respondents that with about 89%.

Welfare facilities and infrastructural facilities will have a lot of energy, money, and time. The school managers should include staff contribution in maintaining staff quarters by given some certain amount of money or a percentage in renovating the staff quarters and likewise students should be include in committees of hostel security activities in order to reduce mismanaging school facilities.

In the end, the essence is to help the tertiary institutions management or heads to identify and evaluate the available facilities that need emergency attention with the view to improving them.

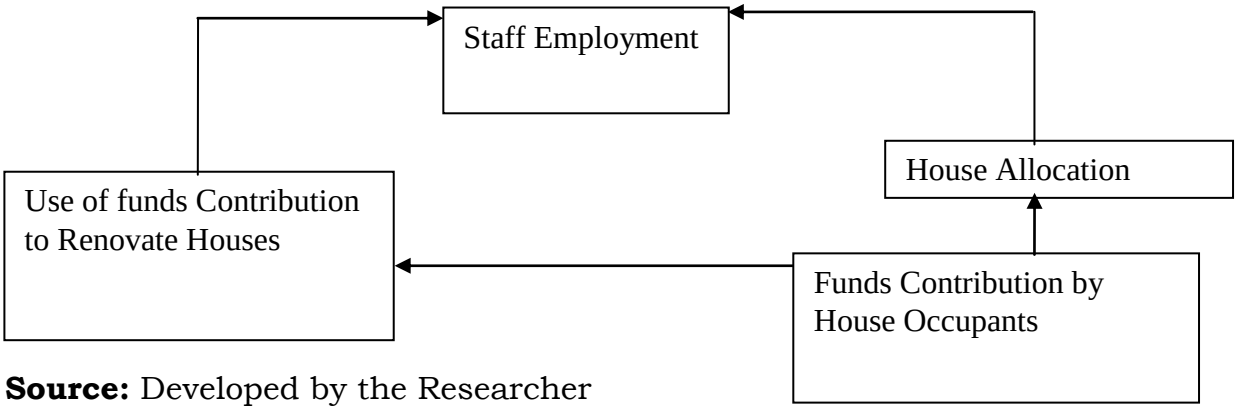
5.4 Recommendations

In view of the findings of the research on evaluation of the availability and maintenance of facilities in tertiary institution in Kaduna state. The teaching and learning facilities when made available and maintained will alleviate some of the problems of poor

maintenance culture of these facilities in tertiary institutions in Kaduna state. It will also facilitates effective teaching and learning and improve performance output of staff and students. In view of the above, the following recommendations were made:

1. Governments at federal and state levels should set up a committee to embark on renovation of tertiary institutions facilities, annually or at interval of either three to five years for the purpose of updating facilities that are available and maintained in a high standard.

Fig 5.2 Contribution Steps for Staff Quarter (Houses) Maintenance in Tertiary Institution of Learning.



Source: Developed by the Researcher

Figure 5.2 could be explained as follows:

(a) **Employment of Staff**: Employment of staff is done by the institution, once a staff is employed, and then he is entitling to housing and other entitlement that staffs enjoys. However, some of these conditions must be fulfilled. The staff must attained three years after been confirmed before will be allocated to house, between this year of service; the staff is contributing for maintenance.

(b) **House Allocation**: A staff cannot be allocated a house until he reach certain years in service, i.e committee would be set to take care of the house allocation with specific consideration, years of services your contribution to houses maintenance. This will reduce and minimized resources own by the institutions, and house will not be in a

stage of dilapidated and it will attractive and conducive in nature. At this stage a house is allocated to a staff.

(c) **Contributions of House Occupant**: At this stage a staff that occupies a house owned by the institution will be contributing 2% out of his salary for maintenance of staff quarter of the institution. This is expected to make the houses to be in a stage of good and healthy enough. The contribution is subject to the approval of the house occupant and it will be continues process.

(d) **Use of Contribution to Renovate Houses**: The money collected or deducted from house occupant, would be used to renovate the houses where need arise. The house occupants will not wait for Estate Department and Management to intervene with school resource to manage the houses, rather it will use contributory allocation to renovate the houses either phase by phase or according to contributions by staff.

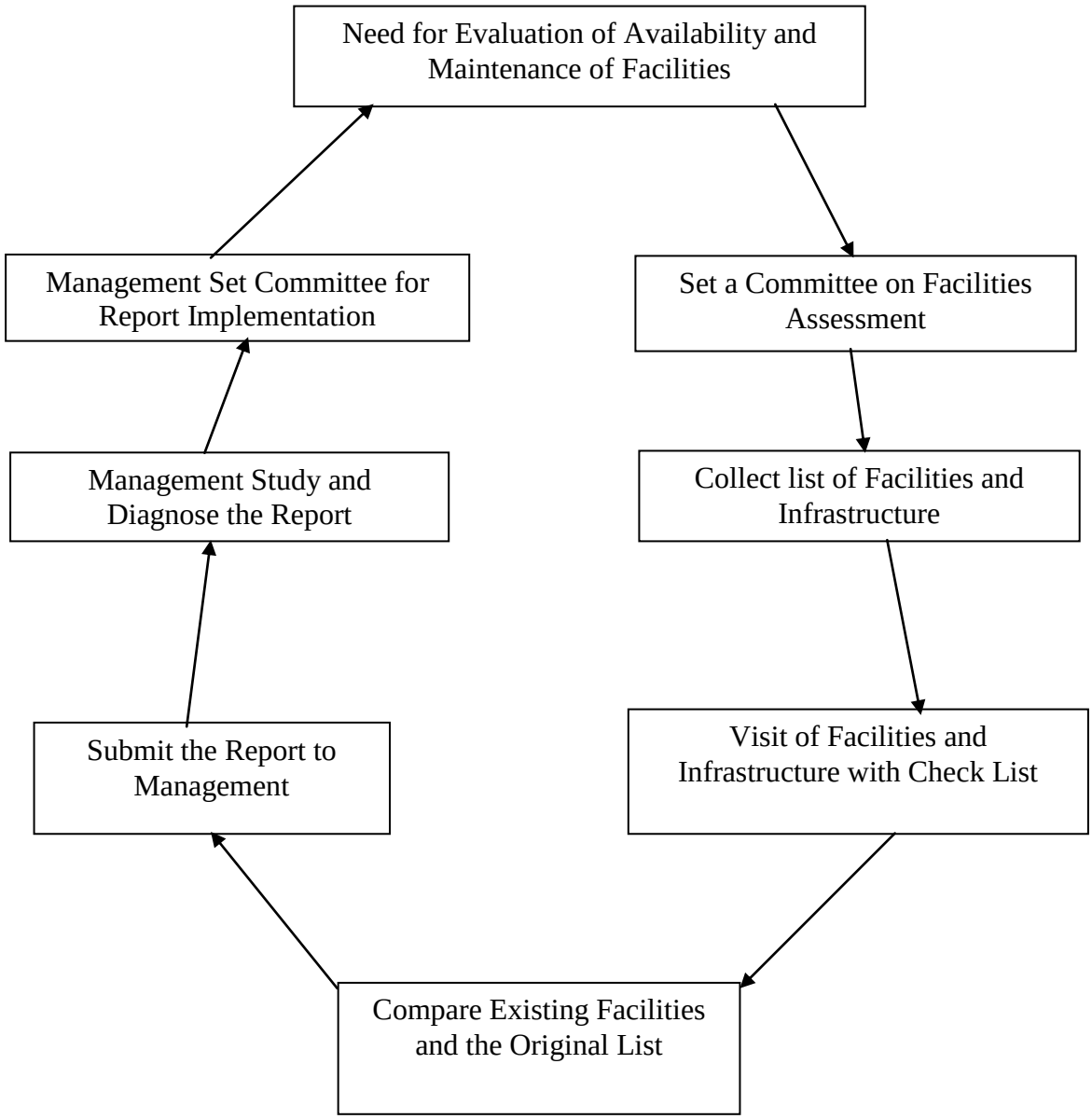
In conclusion, the maintenance of houses for staff will be done regularly and without waiting for the government and individual to renovate

Staff quarters.

This will enable the institution management to maintain the infrastructures in term of house and other facilities owned by the tertiary institutions in Kaduna state.

2. Government should also put or increase funds in annual estimate and budgets separate from normal allocation to every sector as sub-head fund which cater for the maintenance of the available facilities.
3. The management staff as custodians of the institutions' facilities are advised to imbibe the of culture maintenance of the institutions facilities. The head of departments and other principals officers should, through regular check up, ensure that every component of the institutional facilities that require maintenance is promptly maintained. They should also have a duty routine to secure hazard insurance to cover facilities.

Fig. 5.1 Techniques for Evaluation of Availability and Maintenance of Facilities in Tertiary Institution in Kaduna State.



Source: *Developed by the Researcher*

Figure 5.1 could be explained as below here:

(a) **Need for Evaluation of Availability and Maintenance of facilities**: An area of dispute over critical issues concerning the nation's tertiary institutions is the area of facility-maintenance. This is the time to bring to fruition all the time of research and hard work that went into the preparation of the Need for Evaluation of availability and maintenance of facilities in tertiary institutions. Although commentaries, research and editorials have been written about ugly state of facilities and infrastructure in the

tertiary institutions. At this evaluation assessment committee of facilities the members would asses all necessary facilities that suppose to be in a position to be allocated and be functional at all the times so that it will state the stage of all availability facilities and its stage of maintenance.

(b) **Set a Committee on Facilities Assessment**: The main primary duty of this committee is to go and assess all types of facilities that are been provided in the institutions. Thus stage of survival, maintenance and functions so that it would state the condition of improving on the neglected facilities that were abandoned by previous management. In another way, the committee set will find out lifespan and maintenance, duration for effective usage in the various disciplines.

(c) **Collect List of Facilities and Infrastructure:** This is the area where the members of committee will collect all the list of facilities available and stage of maintenance in order to further it, to the management for maintenance or repaired and replacement in case of missing ones.

(d) **Visit Facilities and Infrastructures with Check List:** The visitation to the facilities is purposely done in order to see the state of facilities in term of maintenance and availability. The head of this committee would be Technical Consultant. The Committee members could drown membership from Ministry of Education Science and technology and respective interest unions of the institutions.

(e) **Compare Existing Facilities and the Original List**: The committee has another duty after visitation of the facilities for checking the availability and maintenance. They would now compare what they see and what are required standard. Moreover, the comparism will now enable the committee to separate the available and what is suppose to be according to specification from the original copy. This will call for proper maintenance and replacement for good result or product.

(f) **Submit the Report to Management:** The next duty of this committee after comparing the list with original ones. Is submitting the report to the management. The report will be more concern on the maintenance of the availability facilities to the appropriate authorities for further action.

(g) **Management Study and Diagnose the Report:** The management is expected to study the report thoroughly. In the study proper attention suppose to be given to the relevant and reject irrelevant ones.

(h) **Management Set Committee for Report Implementation:** At this stage implementation is committee is inaugurated by the management to implement the selected relevant aspect of the report as approved by the management. Therefore, the task for implementation of this report for proper implementation of availability and maintenance of facilities, thus the implementation report can be assisted by the following individuals. Committee and all stakeholders, civic society group, must take interest in what the institutions administration do with available facilities for the maintenance.

In conclusion, the tertiary institutions administrators must improve their capacity of officials in physical planning units to ensure that they meet up the demands of the new emerging reality. With effective implementation of the committee of assessment of facilities report and regular Tertiary Education Trust Fund [TET fund] development programmes.

4. The researcher recommends that the annual budget of the institution should be allocated to the facilities supply and maintenance. It is also recommended that more staff quarters be provided to reduce suffering of staff. More importantly the old ones should be renovated at interval of every five years.

5. Institutions managers should engage committee team for cross checking all types of facilities. These offices should also encourage institutional administrators, academic staff, non-academic staff, and students to be involved in maintaining facilities in schools. That is {monitoring team}.
6. The institutions should provide independent means of funds generation that would be used in providing facilities in carrying out repairs and maintenance of institutional facilities that are not managed. Through establishing consultancy services and renting shops. In the end maintenance of facilities is the responsibility for all management staff, staff and students. And institutions managers should encourage private individuals and Non -governmental organization to assist in buildings, equipment, apparatus for practical, drugs and community resources services etc to the development and maintenance of facilities in schools.

5.5 Suggestions for Further Studies

A further research could be conducted on the following area of study, hence the study is only limited to tertiary institutions in Kaduna state. The problems associated with availability and maintenance of facilities are not only peculiar to tertiary institutions in Kaduna state. And it would assist institutions managers to know the level of available facilities and it status of maintenance in the other institutions of learning.

1. Evaluation of availability and maintenance of teaching and learning facilities in Polytechnics in North-West Geo-political Zone. The method for data collection could be check list.
2. Evaluation of Availability and Maintenance of facilities in science and technology and usage in technical tertiary institutions in North-Central Geo-political Zone.

3. Evaluation of availability and maintenance of e-learning facilities in Nigerian university. The method for data collection could be check list.

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APPENDIX 'A'
QUESTIONNAIRE ON EVALUATION OF AVAILABILITY AND MAINTENANCE OF FACILITIES IN TERTIARY EDUCATIONAL INSTITUTIONS IN KADUNA STATE, NIGERIA

Department of Educational,
Foundations and Curriculum,
Faculty of Education,
Ahmadu Bello University, Zaria

Dear Respondent,

REQUEST LETTER

I wish to solicit for your assistance in collecting necessary data on a research topic: Evaluation of Availability and Maintenance of Facilities in Tertiary Institutions in Kaduna State, Nigeria.

Therefore, your contribution in bringing out your honest opinion as one of the members of the management staff, staff and students will surely enhance the validity and reliability of the research under investigation, Moreover, response will be used and treated confidentially. In the end your cooperation is assumed to improve the maintenance of facilities in tertiary institutions in Kaduna State.

Thank you

Yours faithfully,

Musa Muhammad Ibrahim

Section A:

General Information: Please tick in the appropriate box (√) that suit your opinion

1. Gender: (a) Male ( ), (b) Female ( )
2. Status: (a) Management staff ( ), (b) Staff ( ), (c) Students ( )
3. Qualification: (a) Diploma ( ), (b) Degree ( ), (c) Master ( ),
   (d) PhD ( ), (e) Others ( )
4. Institutions: (a) ABU, Zaria ( ) (b) Kaduna Polytechnic ( )
   (c) Kaduna State College of Education ( )
   (d) Shehu Idris College of Health Service and
   Technology Makarfi ( )
5. Years in experiences: (a) 1-5 ( ), (b) 6-10 ( ), (c) 15-20 ( )

The following are the abbreviations use in rating scale as: AV (Available), NAV (Not Available), No Idea [NI] MT (Maintain), NMT (Not Maintain), No Idea [NI].

Section B: Availability and Maintenance of Learning Facilities in Tertiary Institution in Kaduna State.

S/N	Learning facilities	Availability			Maintenance		
		AV	NAV	NI	MT	NMT	NI
1	Relevant books in the library						
2	Write and black boards						
3	Chairs and tables						
4	Class ventilation						
5	E-book library						
6	Departmental library						
7	Adequate seats in library						
8	Adequate E-journal						
9	Still pictures						
10	Fanned boards						
11	Bulletin boards						

Section C: Availability and Maintenance of Teaching Facilities in Tertiary Institution in Kaduna State.

S/N	**Teaching Facilities**	**Availability**	**Maintenance**

		AV	NAV	NI	MT	NMT	NI
12	Laboratory equipment						
13	Projectors						
14	Camera pictures						
15	Television set (s)						
16	Posters						
17	Sliders						
18	Radio set(s)						
19	Buses for excursion						
20	Public address system						
21	Computer						
22	Community resources						
23	Tape recorders						
24	Globes / world maps						
25	Diagrams room						
26	Stationery						

Section D: Availability and Maintenance of Health Facilities in Tertiary Institution in Kaduna State.

S/N	Health facilities	Availability			Maintenance		
		AV	NAV	NI	MT	NMT	NI
27	First boxes						
28	Incinerators / refuse places						
29	Long book for daily routine of illness						
30	Beds (in-patients, delivery maturity)						
31	Oxygen facilities						
32	Blood transfusion services						
33	Injection and sterilization						
34	HIV antibody testing						
35	Insecticide- treated bed net						
36	T.B diagnosis, microscopy malariadiagosis						
37	X-ray machine						
38	Operating						
39	Ambulance						
40	Adult weight scale						
41	Thermometers						
42	Medical doctors rooms						
43	Nursing assistant/nursing aid						
44	Measles vaccine						
45	Brochures, posters, or others						

	materials on safer sex practices.						
46	Short wave radio						
47	School clinic or sick-bay						

Section E: Availability and Maintenance of Sport Facilities in Tertiary Institution in Kaduna State.

S/N	Sport Facilities	Availability			Maintenance		
		AV	NAV	NI	MT	NMT	NI
48	Standard football field						
49	Standard basket ball field						
50	Standard bally ball field						
51	Standard swinging full						
52	Games coaches						
53	Tables tennis equipment						
54	First aid equipment						
55	Long jump and high jump take off						
56	Board						
57	Hammer throwing circles,						
58	Multi-purpose field with synthetic floor						
59	Athlete dressing rooms						
60	Referee dressing rooms						
61	Technical rooms						
62	Store room						
63	Ware house						
64	Ticket office						
65	Wire-net fencing						
66	Bathrooms						
67	Press room						
68	Spectators						

Section F: Availability and Maintenance of Welfare Facilities in Tertiary Institution in Kaduna State.

S/N	Welfare Facilities	Availability			Maintenance		
		AV	NAV	NI	MT	NMT	NI
69	Staff toilet with in offices						
70	Students toilet at hostel & around classes						
71	Vehicles for local transport						

72	Resting room with enough seat for staff						
73	Break period for staff and students						
74	Adequate water supply within school and quarters for staff						
75	Security service at al places within school premises						
76	Health insurance services						
77	Washing detergent						
78	Dormitories shops						
79	Cafeteria						
80	Drugs in clinic						

Section G: Availability and Maintenance of Infrastructural Facilities in Tertiary Institution in Kaduna State.

S/N	Infrastructural Facilities	Availability			Maintenance		
		AV	NAV	NI	MT	NMT	NI
81	Lecture hall						
82	Hostel accommodation						
83	Staff quarters						
84	Laboratories						
85	Workshops						
86	Apparatus for practical						
87	Workshops facilities						
88	Building of classes						
89	Staff offices						
90	Administrative blocks						
91	Power supply						
92	Water supply						
93	Auditions room						
94	Gymnasium						
95	Lobby						
96	Stair cases						
97	Kitchen						
98	Common room for students						
99	Mechanical writing (Leroy)						

100	Guidance /counseling office						
101	Corridors						
102	I.C.T unit						
103	Typist room						
104	Flowers /shrubby						
105	Routing duty						
106	Parking areas						
107	Generator set(s)						
108	Assembly halls						
109	Machines						
110	Engines						