ASSESSMENT OF SCHOOL MAPPING ON ALLOCATION OF SCHOOL FACILITIES IN SECONDARY SCHOOLS IN KADUNA STATE, NIGERIA

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER DEGREE (M. ED) IN EDUCATIONAL ADMINISTRATION AND PLANNING

DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND CURRICULUM,
AHMADU BELLO UNIVERSITY,
ZARIA-NIGERIA

APRIL, 2021

DECLARATION

The researcherhereby declared that this dissertation titled “Assessment of School Mapping on Allocation of School Facilities in Secondary Schools in Kaduna State, Nigeria” has been carried out by me in the Department of Educational Foundations and Curriculum under the supervision of Dr J. O.Egbebi and Dr M. I.Harbau. The information derived from literature were duly acknowledged in thetext and list of references provided. To the best of the researcher’s knowledge, this dissertation has not been previously presented or submitted by anyone anywhere either in part or whole for higher degree.

Muhammad Lawal Hudu
P14EDFC8120 _____

Sign/Date

CERTIFICATION

This thesis entitled "ASSESSMENT OF SCHOOL MAPPING ON ALLOCATION OF SCHOOL FACILITIES IN SECONDARY SCHOOLS IN KADUNA STATE, NIGERIA" submitted by Muhammad Lawal Huduwith registration number P17EDFC8671 meets the regulations governing the award of Masterof Education Degree(Educational Administration and Planning) in the Department of Educational Foundations and Curriculum, Ahmadu Bello University Zaria and is hereby approved for its contribution to knowledge and literary presentation.

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DEDICATION

I dedicated this dissertation to my unforgettable and beloved father in person of Late Mallam Hudu Chikaji, my Mother late HajiyaHauwa(Lami) and my step mother, HajiyaHajara(Yaya). May Allah reward them abundantly, Ameen.

ACKNOWLEDGEMENTS

All praise and gratitude is due to Allah, the cherisher and the Sustainerof mankind and the entire universe.May His peace and blessings be upon the beloved Prophet Muhammad (S.A.W).

Firstly, I acknowledge with gratitude the contributions of my supervisors towards the success of my work. Firstly, I am grateful to Dr. J.O Egbebi my first supervisor who supervised this worktirelessly to ensure that it meets the set standard. His resourceful and challenging statements assisted me to persevere. I really appreciate his mentorship despite his tight commitments and schedules. I remain most grateful to my second supervisor Dr M. I.Harbau for his wonderful and meticulous corrections, academic advice, mentorshipand motivation that sustained my continuity on the programme.

My utmost gratitude goes to Prof. B.A. Maina for his tireless advice,mentorship and motivation towards my academic pursuance. Also Prof. D. O. Otu for her tremendous academic contributions which I will immensely remain grateful to her. I cannot fail to acknowledge the academic contributions of Dr. E.U El-Yakub, late Dr. E.I. Makoju, Dr. A.AIgunnu, and Dr. (Mrs.) Hanna Yusuf. Also not forgetting Prof. A. Guga, Dr. and Dr. M.M. Ibrahim and Late Dr. M.O.Dare. I equally extend my sincere gratitude to the staff of the Department especially Mal. Mai lafiya and Mal. Abubakar.

My sincere gratitude goes to Dr. Jibril Lawal, Registrar Federal College of Education, Zaria for his encouragement and support for the completion of this studies, may Allah strengthen you.

I also acknowledge the staff of the Department of Educational Foundations and Curriculum, especially Mal Abdullahi Mai Lafiya, Mal Abubakar Magaji, Mal Surajo, Mal Musa Yusuf for their support and guidance. I also appreciate the contributions of Mal Abdurrashid Salman (El mailaya), Mal Khalid Nasir, Mal Sadisu Abubakar, Umar A B Jamaleen, and Mal M. Y. Zubairu for their assistance and motivation. I appreciate the untiring effort of Mallam Usman Mohammed

who analysed the data and indeed all the staff of Educational Foundations and Curriculum for their prompt assistance.

I remain most grateful to my parents whom supported me throughout my life, My Father Late Mal Hudu Chikaji, my mother Late Haj Hauwa (Lami), and my step mother Haj Hajara(Yaya), may Allah reward you with Jannah (Ameen) My Elder Sister Aisha Hudu Chikaji, Haj Fatima Hudu Chikaji and all my Brothers in HUDU CHIKAJIS FAMILY. Mohammed Aminu Idris among others, for their prayers assistance and words of encouragement. I admire the gesture, patience of my wives Haj Halima Abubakar Waziri and Rukayya Abubakar (Momi), My beloved Children Hudu L.Hudu, Fatima L Hudu, Muhammad L. Hudu, Ibrahim L Hudu (Muazzam), Hameedah L. Hudu, Abubakar L. Hudu, Jibril L Hudu and Salisu L. Hudu Chikaji who showed concern, courage and sacrifice for the success of this Great work of mine.

My special thanks to the Almighty ALLAH.

ABSTRACT

The study is titled “Assessment of school mapping on allocation of school facilities in secondary schools in Kaduna State, Nigeria. The study was guided by five objectives, five research questions and five corresponding null hypotheses. The design of the study is descriptive survey design.The study’s population consisted of principals, teachers and supervisors numbering 10,931 comprising of 541 principals, 10,294 teachers and 96 supervisors from twelve (12) educational zone in Kaduna State.Purposive sampling technique was used.The sample size used in the study was 378 which consisted of 40 Principals, 326 Teachers and 12 Supervisors.Self-developed structured questionnaire titled “Assessment of school Mapping on Allocation of School Facilities in Secondary Schools in Kaduna State,Nigeria” was usedas instrument for data collection.The instrument was duly validated by supervisors and statisticians for content and construct validity.The instrument was pilot tested and the reliability coefficient index power stood at 0.7 using Pearson Product Moment Correlation coefficient. Analysis of Variance (ANOVA) was used as instrument for data analysis. The study among others found that school mapping created a balance in the establishment of new secondary schools in Kaduna State.In the light of the foregoing, some recommendations were proffered which includethe need for Kaduna State Government to ensure existing tempo of school mapping maintained and improve upon in secondary schools, this will ensure that schools are distributed according to need specification.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Education is a critical factor in the development of both human and non-human resourcesfor national development in the education sector. It occupies a central position in the dynamics of national development plans of countries across the globe, but more pronounced in the developing ones that are desperately struggling against the pains of ignorance, illiteracy, hunger, disease and marginalization. Whether viewed from investment or social perspective, education remains vital to the process of improving the productive capacity of individuals, and by extension, the socio-economic development of a nation. This is expected to be attained through proper and adequate planning of school plant facilities in school organizations in the entire country most especially secondary schools in Kaduna State. School mapping goes a long way in the process of making forecast for formidable school plant facilities. The planning of education is imperative. This is founded on the strict adherence to the principle of systemic integration in the educational planning process. Educational planning is basically a decision-making task that rationally analyses the prevailing situation, harnessing the available human and material resources for the attainment of predetermined goals in the future. One of the fundamental reasons for educational planning is economic efficiency in resource utilization. A very important and integral part of educational planning is school mapping**.**

School mapping is the systematic process of determining the future needs for education,School facilities at the different levels and types and their continuous rationalization within a definite geographical area. School mapping is periodically carried out to determine the existing school network, the distribution of educational facilities and to project into the future, the demands that would be made on them as a result of the dynamic nature of a given society.

This is primarily with reference to population behavior and occupational changes. School mapping is carried out basically to ensure equity, access and economic efficiency.School mapping is an important planning technique to arrive at rational decision regarding distribution of educational facilities across different geographical locations. The term "school mapping" seemingly implies the exercise that is confirmed to location of schools and distribution of school facilities. School mapping could be considered as a process of identifying the educational need of a given society through investigation and survey exercise and it is a set of techniques and procedures used to plan the demand for school places at the local level and to decide the institutional level. It is the geographical location of schools. It is not only concerned with the drawing of maps, but deals with school location, planning, the distribution of sizes, spacing of schools and school facilities.

School mapping is seenas the planning tool in the education sector which provides an analytical framework for the implementation of education plans. They offer methods and techniques to estimate future needs and to identify ways to meet them. They can help to overcome the limitations of centralized planning through the correct understanding of local realities, the necessary consultation of relevant stake holders to facilitate a better fit between educational supply and demand. School mapping techniques (diagnostic,projections,use of norms and standards) and other relevant tools such as geographical information system (GIS) software, hardware, for the elaboration of a prospective school map.

The Universal Primary Free Education programme in 1955 in the education sector in Nigeria was bedeviled with the avoidance of proper school plant planning.This development allowed some communities, societies in both the rural and urban areas to take advantage of school plant allocation of school resources over the other due to unevenly distribution of school

plant facilities. This up till present led to the challenges facing education in the country. School Mapping techniques help us to identify the mostappropriate locations of schools or their alternatives so that maximum number of children can bebenefited from the same level of investment and to reduce regional inequalities in the educationalfacilities. The following are the major objectives of the school mapping. To identify most appropriate location (Habitation or Village) for opening of new/ upgrading Secondary School; to identified most appropriate location (Habitation or village) to open alternatives of new school; to identify the location for opening of alternatives to formal school; to level out existing disparities in the distribution of educational facilities and to create equality of educational opportunities

The subject of school facilities had received considerable attention from the public as well as educators. Educators are faced today with a growing challenge of distributing the nation's educational facilitiesdue to paucity of fund;at the same time, educators were held accountable for students' achievement School Facilities Distribution Task Force (2003). Technically speaking, school facilities, refer to those material things that help or aid the teaching and learning process in school.School facilities could be viewed from two perspectives, namely, those facilities needed specifically for the academic or curriculum development of the students and those facilities that are either generalist in nature or that help the physical or non-curricular (including co- curricular development of the students. Examples of the former classification include teaching aids like books, filmstrips, chalk, marker pen, stationery, syllabus, scheme of works, charts audio-visual materials, writing board etc. The latter include seat/desks, sizeable classrooms, functional libraries, well equipped laboratories, electricity, water, offices, play field, hostels, gardens, space for future expansion. School facilities have been observed as a potent factor to quality education.

Location of schools is function of school mapping. School mapping is therefore, the process of estimating and diagnosing school requirements and identifying the ideal communities and sites where new schools are to be located and where additional educational resources are to be provided. Many secondary schools have no library, where they exist; they are filled up with outdated textbooks. Classroom as a facility is one of key measures of quality as it determines the student-teacher ratio of any educational system. The availability and state of the classroom plays a key role in facilitating or engendering the teaching-learning process (Ahunanya&Ubabudu, 2006). School mapping therefore paves way for provision of well-equipped classroom with modern learning facilities. One of the most effective vehicles by which the process of inquiry can be learnt is the laboratory where the students' experience first-hand inquiry process. Instructional theory of learning interaction, hypothesized that the laboratory had a direct effect on both students' attitudes and academic performance. This has given rise to the expectation that laboratory facilities should be adequately provided to secondary schools for effective teaching and learning. School mapping therefore creates avenue for this to happen; it is the deliberate effort to ensure efficiency in school location and rationalization. This aspect has a more direct implication because it ensures that educational institutions are located where they can be optimally utilized by the end users

The dictum that "teaching is inseparable from learning but learning is not separable from teaching" is that teachers do the teaching to make students learn, but students can learn without the teachers. School facilities have an impact on teachers' effectiveness and students' performance. This is so because they determine to a very large extent the smooth functioning of any social organization or system including education. Their availability, adequacy and relevance influence efficiency and high productivity.From the foregoing, it has been

observedthat school organizations face a lot of challenges on school mapping and school plant facilities citing, provision and distribution/allocation in the education sector in Kaduna State. To fill the gap, the researcher conductedthis research on the assessment of school mapping on allocation of school plant facilities in secondary schools in Kaduna State.

1.2. Statement of the Problem

Challenges of educational planners and administrators have been to equalize educationalopportunities for all, to provide easy access to educational facilities to all children. If allhabitation / villages are to be provided withschools then the question of inequality does not arise.But in real life situations schools are located in such villages so that other habitations and villagesalso benefit. How do we decide on the village/ habitations where schools are to be opened so asto ensure equality of educational opportunities? (Agu& Miyazawa, 2002).

Equalization of education opportunities is a necessary condition to promote faster progress of education this can be achieved through school mapping which has to do with effective allocation of schools and resources. Creation of easy access condition to schools or their alternatives becomes a necessity and essential step towards provision of equal opportunities for secondary schools. However, the distribution of senior secondary schools within Kaduna state is not equitable and this has resulted to better access to quality education.School facilities and distribution of same are necessary for effective teaching-learning process (Szuba& Young, 2003). Provision and distribution of school facilities are the corporate responsibility of the government and non-governmental organizations. The unending attention which school facilities have continued to receive from scholars in the field of education is a pointer to the necessity for it.

Available literature revealed that facilities are required for various activities of the school programme including extra-curricular activities. Some literature further revealed that the individual schools determine the types and qualities of facilities needed. The facilities often needed in schools include, e-learning facilities, chalk board, marker board, classroom apparatus such as wall, charts, maps, writing materials as well as polygraph, offices, laboratories, libraries and other equipment. All of which are necessary for achieving the quality education in schools.

Despite the rapid increase in the establishment of secondary schools nationwide, and Kaduna state in particular, the mapping of the location and distribution of educational services have been sadly ignored by the educational planners, administrators and political leaders and the government. This is because many educationists still do not understand the concept of "school mapping" and at times, confuse it with the ordinary 'map' showing the location of educational institution.But in actual sense, school mapping is more than simply compiling a map which show the locations and distribution of schools. School mapping is a process that involves planning and distribution of all input into the school system such as teachers, buildings and teaching and learning materials for the efficient functioning of an educational system. This basic knowledge is needed to be given more emphases rather than being ignored by those supposedly concerned with school mapping in Kaduna State.

This has led to many crises of school plant allocation such as inadequacy, non-distribution, inequality of resource allocation, in appropriate location of schools and in appropriatedeployment of teachers. In Kaduna state, there is problem of allocation of new secondary schools, science laboratory, school library, classrooms, and multi-purpose hall among others. This indeed is what prompted the researcher to embark on this study in order to assess school mapping on allocation of school plant in secondary schools in Kaduna state, Nigeria

1.3 Objectives of the Study

The study has the following specific objectives.

1. To determine the influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria.
2. Ascertain the influence of school mapping on allocation of science laboratories in secondary schools in Kaduna state, Nigeria.
3. Find out the influence of school mapping on allocation of school library in secondary schools in Kaduna state, Nigeria.
4. Assess the influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria.
5. Examine the influence of school mapping on allocation of multi-purpose hallin secondary schools in Kaduna state, Nigeria.

1.4 Research Questions

The following research questions are formulated to guide the study.

1. To what extent does school mapping influence theallocation of new secondary schools in Kaduna state, Nigeria?
2. How does school mapping influence the allocation of Science Laboratories in secondary schools in Kaduna state?
3. In what way does school mapping influence the allocation of school libraries in secondary schools in Kaduna state?
4. Do school mapping influence the allocation of classrooms in secondary schools in Kaduna state?

5. What is the influence of school mapping on the allocation of multi-purpose halls in secondary schools in Kaduna state?

1.5 Research Hypotheses

The study has the following Null Hypotheses

1. There is no significant difference in the opinions of respondents (principals, teachers andMOE) on the influence of school mapping on allocation of new secondary schools in Kaduna State, Nigeria;
2. There is no significant difference in the opinions of respondentson the influence of school mapping on allocation of science laboratories in secondary schools in Kaduna state, Nigeria;
3. There is no significant difference in the opinions of respondents on the influence of school mapping on allocation of school librariesin secondary schools in Kaduna state, Nigeria;
4. There is no significant difference in the opinions of respondents on the influence of school mapping on allocation ofclassrooms in secondary schools in Kaduna state, Nigeria;
5. There is no significant difference in the opinions of respondents on the influence of school mapping on allocation of multi-purpose halls insecondary schools in Kaduna state, Nigeria.

1.6 Basic Assumptions

The study assumes that:

1. Effective school mapping leads to establishment of more secondary schools in areas where they are most neededin Kaduna State;
2. Proper and timely school mapping leads to identification of schools that need new science laboratories and those that need upgrading of the existing equipment in secondary schools in Kaduna State;
3. School mapping bring about provision of modern school libraries, renovation and upgrading of the already existing ones in Kaduna State;
4. Quality school mapping gives raise to provision of additional blocks of classrooms in areas they are most needed in secondary schools in Kaduna State;
5. The provision and maintenance of multi-purpose school halls in most secondary schools will be given required attention through effective school mapping in secondary schools in Kaduna State.

1.7 Significance of the Study

Thestudy is expected to benefit the various stakeholders in the business of education in Kaduna State and Nigeria at large.

To the Government, the findings of the study will provide fist hand information to the government of Kaduna state on areas that need new secondary schools, more blocks of classrooms, upgrading / establishment of modern school library and science laboratories.

The students will be the ultimate beneficiaries of the findings of the study. Whatever the improvement in the quality of service delivery in secondary schools in Kaduna state as a result of the findings of this study will directlybe enjoyed by the students.

The findings of this study will guide educational planners to make rational decisions about school mapping in the Kaduna state. The findings of this study will guide policy makers to make rational decisions in formulation of educational policies and programmes

Whatever is going to be provided in terms of school plant allocationwill assist the teachers in the process of teaching and learning in secondary schools in Kaduna state**.** The findings of this study will assist school managers on how to deploy available school resources to the right personnel at the right time and at the right place.

1.8 Scope of the Study

The study is on the assessment of school mapping on allocation of school facilities in secondary schools in Kaduna State, Nigeria covered the twelve (12) educational zones of KadunaState; namelyGodogodo, Lere, Zaria, Anchau, Rigachikun, Zonkwa, Kachia, Giwa, Kafanchan, Kaduna, Birnin-Gwari and Sabon Tasha. The study covered principals, teachers and supervisors of secondary schools in Kaduna State.The study isdelimited to only public secondary schools in Kaduna State.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter is concerned with the review of related literature to the study. Relevant literatures were therefore reviewed under the following sub-headings;

2.2 Conceptual Framework

2.2.1 Assessment

2.2.2 School Mapping

2.2.3 School Plant

2.2.4 School Library

2.2.5 Science Laboratory

2.2.6 Classroom

2.2.7 Multi-Purpose Hall

2.3 Theoretical Framework

2.4 Influence of school mapping on allocation of new secondary schools

2.5 Influence of school mapping on allocation of science laboratories insecondary schools

2.6 Influence of school mapping on allocation of school library in secondaryschools.

2.7 Influence of school mapping on allocation of classrooms in secondary schools

2.8 Influence of school mapping on allocation of multi-purpose hall in secondary schools

2.9 Empirical Study

2.10 Summary

2.2 Conceptual Framework

School mapping, to a great extent, act as a bridge between the fixing of overall objectives and their translation into definite actions at the local level. It is bridge between the planning of education and its administration. It is a complex of operation that allows for the interaction

between different levels of administration. School mapping does two basic things: (i) The rationalization of education resources (ii) Securing greater equality of educational opportunity. This implies seeking appropriate measures to guarantee equality in access to education and in teaching – learning conditions (UNESCO, 2010). The objectives of school mapping cut across the functions in micro planning, but principally, it is concerned with the problems that are associated with access and accessibility to the education system (school location). School mapping, a fundamental aspect of micro-planning involves basically the understanding of how the present educational services meet the needs of the local population groups (environmental diagnosis), and proposing better ways of distributing educational services or of diversifying their action programmes. School mapping and micro-planning ensure that global objectives are adapted to the particular characteristics of each region. This constitutes a formative stage in the planning process which entails applying the national plan at the regional and district levels. This is a great contribution to increasing the chances of attaining the national educational goals and objectives (IIEP, 1982). Hence, it seeks to satisfy effectiveness and to minimize costs as much as possible, while taking into account the overall educational objectives (Longe, 2000).

One of the fundamental reasons for the planning of education is to ensure economic rationality, efficiency in the utilization of education resources (human and material) and the minimization wastages. This position was buttressed by Agabi (1999) as he remarked that the first rationale for the planning of education for the optimum allocation and utilization of resources available, to satisfy the society's numerous and competing needs, including education, are not only scare, but subject to varied uses, put pressure on the need to be rational in the allocation of these resources is simply as a result of resource scarcity subject to needs. The simple fact is that the resources are meant to achieve the highest benefits. Consequently, it can

easily be concluded that without the most fundamental economic problems of scarcity and the need for choice, there would have been no need for planning. School mapping, as an integral part of planning, is therefore one of the strategic instruments to achieve some economic rationality and efficiency in the determination of school network and rationalization in an educational system through micro planning.

Location of schools is function of schoolmapping. School mapping is therefore, theprocess of estimating and diagnosing schoolrequirements and identifying the idealcommunities and sites where new schools areto be located and where additionaleducational resources are to be provided.School mapping is viewed asschool location planning which is a techniquefor evaluation of use-efficiency, reorganizationand re-distribution of resources(physical and human) that are required formeeting the current and future needs ofeducation in the society. Location planning isa term often applied to the set administrativepolicies and procedure that are used inplanning, distribution, size and spacing ofschools. This involves efficient planning ofthe site and school resources to ensuregreater access and efficient use of the schoolby the community it served(Musibau&Oluwarotimi, 2008).

2.2.1 Assessment

Assessment is the process of documenting, usually in measurable terms, knowledge, skills, attitudes and beliefs. Assessment is an action which determines the importance, size or value to something. According to Barbara (2004) assessment is the systematic collection of information about student learning, using time, knowledge, expertise and resources available, in order to inform decision about how to improve learning. Furthermore, assessment is a process of seeking the best available indicator to see if goals are being met. This includes field specific and professional judgments about learning outcomes which are used to inform departmental and

institutional decision. According to him, assessment means basing decisions about curriculum, pedagogy, staffing, advising and student support upon the best possible data about learning and the factors that affect it. Similarly, Palomba and Banta (1999) defined assessment as a systematic collection, review and use of information about educational programmes undertaken for the purpose of improving student learning and development. In line with the above assumptions, Shepherd and Godwin (2004) stated that assessment is the term generically used to describe quizzes, test, surveys and examinations. Furthermore, assessment is any systematic method of obtaining evidence from posing questions to draw inferences about the knowledge, attitudes and other characteristics.

According to Roger (2010) assessment is associated with institutional effectiveness and related to questions about positive change and improvement in the institution. In accordance with the above assertion, Frye (2006) stated that "when we assess our performance, it is assessment, when others assess our performance, it is accountability. That is to say assessment is a set of initiative we take to monitor the results of our actions and improve ourselves, accountability is a set of initiatives other take to monitor the results of our actions and to penalize or reward us based on the outcomes. Furthermore, assessment is not an end in itself but a vehicle for improvement education. Assessment is at the continuing improvement of student development and is generally consistent with a value added concept of education and rationale for having better programmes to ensure better students" learning outcomes

2.2.2 School Mapping

School mapping is an integral part of educational planning. It deals with the provision and rationalization of educational facilities, majorly from two angles: educational institutions at all levels and types and other school facilities. School mapping is the continuous process of

determining, reviewing school network and educational facilities in order to ensure effectiveness and efficiency with educational goals and objectives of a definite geographical area. It is more of micro educational planning, considering the fact that it is more effectively carried out at state or local level. School mapping, to a large extent, combines with school plant planning. It involves the identification of the educational needs of a locality on a regular basis, through the assessment of the availability, condition and the utilization rate of educational facilities in that area. The aim of this exercise is to identify locations where existing and under-utilized facilities should be moved to, as well as where new ones are needed (Agabi, 1999).

School mapping entails the collection and analysis of demographic data and data on the existing educational facilities of a given area with the aim of making education more effective and efficient. It takes care of the future demands on education at various levels and types. UNESCO (2010) described school mapping as a set of techniques and procedures used to identify future needs in education at the local level and to plan for measures to be taken to meet them. It is a forward-looking and dynamic vision of what the education services, with their premises, teachers and equipment should be in the future so as to enable educational policy to be implemented. Whenever there is rational planning, the country's education plan, within a defined time frame, determines the quantitative and qualitative aims for education by the relevant authorities, considering the available resources. School mapping therefore, becomes the means of putting the aims of the plan into concrete shape on the ground so as to achieve educational aims as regards school children, wherever they may be and can be brought together (IIEP). Ipso facto, school mapping is a strategic technique for the concretization of educational plans in order to address the educational needs of the society. The outcome of the process is the school map of a clearly defined geographical entity. Madumere(2010) remarked that school mapping goes

beyond the identification of locations for the construction of schools, classrooms, laboratories and workshops. It is also a technique for the evaluation of use-efficiency, reorganization and redistribution of resources (physical and human), that are required for meeting the current and future needs of a society. It basically entails the setting up a school network that will meet in the most efficient and equitable way possible, the future demand for education.

Muhammad (1991) defined school mapping as a process that involves planning and distribution of all inputs into the school system such as teachers, buildings and teaching and learning materials for the efficient functioning of an educational system. School mapping can be described as a set of techniques and procedures used to identify future need in education at the local or regional level and to plan for measures to be taken to meet them.

School mapping according to Varghese (1997) particularly in developing countries is most often used to facilitate one or more of six functions:

1. to create the necessary conditions for achieving universal primary and secondary education; i.e. all what is required of in ensuring the successful provision of universal primary and secondary education is being considered
2. to increase access for females and other under-represented socio-economic groups; i.e. without proper school mapping females and less privilege members of the society may not have access to education.
3. to promote the equitable distribution of educational benefits within and between different regions and populations; proper mapping of schools will ensure equal distribution of benefits derived from education.
4. to improve the quality of education; i. e education received will be improved in terms of standard.

5. to optimize the use of capital, human, and financial resources; Here it means there is going to be better utilization of human and financial resources.
6. to organize, coordinate, and rationalize efforts at technical, vocational, and post-secondary education.

Purpose of school mapping

The main purpose of school mapping is to set-up a school network which would meet thefuture demand for education. In the contextof Nigerian educational system, the essentialfunctions of school mapping is to help realizethe targets set by the Federal Republic of Nigeria (NPE, 2014), thehighlights which are asfollows:

1. The provision of compulsoryeducation to include the juniorsecondary level, thus creating a nine-year basic education.
2. The provision of free universalbasic primary education.
3. The extension of higher and otherforms of education within the limitsof the resources available and thecountry's economic and socialrequirement.
4. The implementation of educationalreforms.
5. The improved efficiency in the useof resources. However, asProvide information on thelearning needs of the society.
6. Provide inventory of existinginstitutional facilities.
7. Reveals the extent of under-utilizationor over-utilization ofexisting educational facilities.
8. Provide guidelines for the reorganizationof institutionalfacilities.
9. Supply information on where newfacilities are to be erected and couldbe utilized to the best advantage.

Methodology of School Mapping: - School mapping involves the following steps: -

1. Specification of norms standards & catchment area.

   i. Norms for opening of new schools-

   ii. Distance/Population/Difficult area

   iii. Norms for teacher.

2. Diagnosis of existing educational facilities.

   I. Assessment of existing educational facilities in selected area or region schools.

   II. Required information is useful to prepare school specific plan.

   (i) Literacy Rate/ Enrolment Rate /Retention Rate/ Dropout Rate etc.

   (ii) No of Teachers.

   (iii) Teacher-pupil ratio

   (iv) Building and infrastructural facilities

   (v) Blackboard, water, Toilet, electricity playground etc.

3. Projection of future child population.

   I. Assessment of the number of children which is to be enrolled.

   II. It is based on projection of child population in the catchment area.

   III. Benefits

   (i) To know No of New Schools to be opened or other alternatives to formaleducation.

   (ii) To know No of Schools to be upgraded.

   (iii) No of teachers required.

3. Deciding the location of schools.

   I. Based on Norms specified by the authority.

   II. SM exercise does not decide the site to construct schools. It only indicates the mostappropriate habitations/ village where school are to be opened.

III. Finding appropriate sites is to be done in consultation with villagers, engineers andeducation authorities.

4. Assessing the requirements or facilities in schools: - This implies: -

I. Assessment of requirement of facilities in new school and in existing schools.

II. This includes requirement of infrastructural facilities and teaching learning materials.

5. Estimating financial resources requirement.

I. Based on the requirement of facilities cost estimates can be made and proposal can bemade for funding.

6. Prioritization of assessed requirement & facilities in the schools according to financialresources.

I. Based on the available budget for every year proposal can be made.

2.2.3 School Plant

The term school plant includes the site, the building and the equipment. It includes permanent and semi-permanent structure as well as items such as machines, laboratory equipment the blackboard/chalkboard the learner and teacher tools. Enaohwo and Eferakeya(2009) defined school plants as the entire physical infrastructural facilities provided in the school for the purpose of educating the child. Ojedele(2017) have a broader view of school plant as including the school site and all the structures that have been put in place to aid effective teaching and learning in the school system. In his own view Yusuf (2008) defined school plant as the space interpretation of the school curriculum. The curriculum cannot be implemented if the physical facilities required for teaching and learning are not available. Without school plant, the

school cannot exist to this end, it becomes necessary to ensure that school plant is properly planned and maintained to facilitate the effectiveness of the school system.

Moreover, school plant refers to all non-consumable and durable physical and infrastructural facilities available in the school for teachers' and students use in order to make teaching and learning effective and thus ensure the achievement of pre-determined aims and objectives of education hence, the school plant includes thespace within the school premises which houses the basic systems and structures.

The school plant, which refers to the physical facilities available in the school such as a school site, the buildings and equipment, could simply be likened to the capital in an industrial setting. Just like the system itself, the school plant needs to be adequately managed in order to ensure both effectiveness and efficiency of the system. Thus, school plant management refers to the process of planning, construction, utilization and maintenance of school facilities to ensure goal achievement. Durosaro (1998). School plant as a concept refers mainly to the non – consumable materials in the school for the promotion of teaching – learning activities. According to Enaohwo and Eferakeya (1989), school plant relates to the entire scope of physical infrastructural facilities which are provided in the school for the purpose of educating the child. As skeleton is to a person, so are facilities or theschool plant necessary for the realization of result-orientedteaching and learning inthe classroom(Okon&Sule, 2006).

Essentially, the school plant consists of the basic systems and structures which a viable school or institution needs in order to function effectively and to fulfill the purpose for which it established. In a developing country like ours, however, the school plant, in practice, often lacks some of these basic systems and structures. For example, many secondary schools in the country are yet to install their introductory technology equipment and machines almost two

decades after they were supplied by the federal government because they lack electricity supply, and inadequate personnel and technicians to operate the machines. Many schools have no supply of drinkable water; in this computer age, most of our schools have no computers and where they are available, they are grossly inadequate and in some cases they are dysfunctional or obsolete. Many secondary schools have no library, where they exist; they are filled up with outdated textbooks.

School plants refers to "those things of education" which enable a skillful teacher to achieve a level of instruction effectiveness that exceeds by far what is possible when they are not provided. School plant could be viewed as every item that is permanently or semi-permanently made available which contribute significantly to the attainment of effective and efficient teaching and learning activities of the school.In other words, it refers to the indispensable physical facilities without which teaching and learning process will be rendered ineffective, boring and would consequently turn the school to a "grave yard".

Cole(2000) categorized school plant into the following components.

i. **Buildings:** Classroom blocks, libraries, laboratories, workshops, hotels and staff residential quarters (where applicable), assembly halls, administrative blocks/offices etc.
ii. **Equipment:** Laboratory and workshop equipment, sporting and health equipment, teaching aids, typewriters and photocopiers, computers etc.
iii. **Machinery:** Workshop machines and tools, duplicating and other secretarial machines etc.
iv. **Furniture:** Classroom and offices furniture, hotels and staff residential quarters furniture (where these exist), etc.,

v. **Books:** textbooks, stationery and library books etc.,

vi. **Electrical infrastructure:** Overhead electrical conductor lines, meters, generator set air conditioners, fans and other electrical fittings.

Vii Water supply infrastructure: Public water supply extension to school, boreholes and deep wells, water tanks etc.

Yusuf (2008) and Ajayi (2007), school plants comprise the following:

i. Machinery: It includes machines and tools used in the workshop, duplicating machines and so on.

ii. School site: This refers to the entire landscape on which the school's permanent and semi-permanent structures are built.

iii. Buildings: These include classroom blocks, administrative offices, libraries, workshops, laboratories, students, hostels, staff residential quarters, assembly halls, toilets, dining hall and so on.

iv. Equipment: These consist of typewriters, photocopiers, computers, sporting equipment, laboratory equipment and workshop equipment.

v. Furniture: Desks and seats used in the classroom's office furniture, residential furniture and soon.

vi. Vehicles of various types and sizes.

vii. Books, textbooks, periodicals and all library books.

viii. Electrical infrastructure: Air conditioners, electrical fans, generating sets and other electrical fittings.

ix. Water supply infrastructure: This involves deep wells, boreholes, water tanks and public water.

x. Accessories: These include playgrounds, lawns, parks, garden and farm.

2.2.4 School Library

The word Library has been derived from the Latin word "Libraria"which means a place where books and other reading materials are stored.According to the Oxford English Dictionary "Library is a building, roomor set of rooms, containing a collection of books for the use for the publicor of some particular portion of it, or of the members of some society, orthe like; a public institution or establishment, charged with the care of acollection of books, and the duty of rendering the books accessible tothose who required to use them"'.

The above definition of library has undergone significant changeswith the changing times, civilization and culture. The modem definitionof a library is a place, where documents containing knowledge andinformation are stored technically and scientifically processed, properlypreserved and made easily available to the users when warranted withoutloss of time. The library is also sometimes referred to as the "memory ofhuman race". Library is a fountainhead of information and knowledge. Itcan be compared to a giant brain that remembers all that the scientists, thehistorians, the poets, the philosophers, and other great intellectuals have thought and learned. In short, a library is a place where the experienceand expertise of the past can meet the needs of the present. Hence, aLibrary can be defined as a collection of graphic acoustic and holisticmaterial such as books, periodicals, newspapers, manuscripts, maps,charts, filmstrips, microfilms, photographs, records, or any recorded pieceof information systematically arranged and a designed for use. Itfunctions to collect organized and disseminate knowledge/information to users.

Types of Libraries

Libraries may be broadly categorized into the following according to International Federation of Library Association (IFLA) (2001) based onthe nature of the library users, the kind of Library materials and theservices provided:

i) Public Libraries,

ii) Academic Libraries

iii) Special Libraries

iv) National Libraries

v) Contact Libraries

i) Public Libraries

The provision and purpose of the public Library is to provide forevery person the education obtainable through reading. UNESCOmanifesto which defines Public Library as (a) which is established underthe clear mandate of law (b) Which is "maintained wholly from publicfund" (c) Which levies no "direct charge" on its users for any of itsservices and (d) Which is open "for free and equal use by all members ofthe Community" regardless of race, colour, sex etc.The most widely accepted UNESCO definition of a public library,which was formulated in 1949, and revised in 1972 and 1994, is knownas the UNESCO Public Library Manifesto. The definition of a PublicLibrary according to its manifesto is as follows:

1. It’s a public library, that being the local gateway to knowledge,provides the necessary conditions for (i) lifelong learning (ii)Independent decision making and (iii) cultural development of theindividual and social groups;

2. A living force for education, culture and information, an essentialagent for the fostering of peace and spiritual welfare through theminds of men and women;

3. The local center for information, making available all kinds ofknowledge and information readily and freely to its users;

4. Accessible for all regardless of age, race, sex, religion, nationality,language or social status and lastly.

The libraries, which have collections and services of all types ofappropriate media and modern technologies, as well as traditionalmaterials with high quality and have relevance to local needs andconditions. Materials must reflect current trends and evolution of society,as well as the memory of human endeavor and imagination'.

ii) Academic Libraries

Libraries that are attached to educational or academic institutionsare called as Academic libraries, these include the libraries of schools,colleges and universities and similar institutes, which cater to the needs ofdifferent levels of academic community.Library is the most important intellectual resource of the academiccommunity and helps the members of the institution individually as wellas collectively for self-development, fulfillment of curriculumrequirements and promotes study and research(Ogunsola, 2004).

Isaac () observes, "A Library attached to an academicinstitution like a school, college or a university is called an academiclibrary. Its role is to help and promote the objective of its parentinstitutions. A school library is an agency for the realization of theobjectives of school education and college and university libraries seek topromote the objectives of higher education. Academic Libraries supplement academic instruction and play anindispensable role in the dissemination of information and knowledge.They collect, store and disseminate information and also perform thelaboratory function by making its resources to be used by the academiccommunity in the learning process.

iii) Special Libraries

Special libraries began to emerge and develop in response to theincreased tempo of industrial, scientific and technological advances. Theterm special library means a library, which *is* concerned almostexclusively with the literature of a particular subject or a group of subjects. It exists to serve the personnel of the parent body. It serves specialist clientele, located within single organizationor group and is responsible for the collection, organization, storage,retrieval and dissemination of information directly concerned andancillary to, the work of the specialized institution with which it isattached(Saliu, 2002). Thus, there are three basic elements in a special library that isspecial readers, special collections and special location.According to Harrod (), 'Special Library is "a collection ofbooks and other printed, graphic or recorded materials dealing with alimited field of knowledge and provided by a learned society, researchorganization, industrial or commercial undertaking, governmentdepartment or even an educational institution. It may also be a specialbranch of a public library serving certain interests or occupational groupssuch as a technical library or a special subject library, meeting the needsof all enquiries on that given subject such as a music library".The emphasis in a special library is on information services, onproviding the specialized user with information rather than with material"putting knowledge to work" is the watch word of special librarianship; itis the characteristic which best defines "Special" in Special Library.

iv) National Libraries

National Libraries are distinct from other types of libraries. Theyare financed and maintained by the government of that country and existsto serve the whole nation. They are normally very large having millionsof books. Their main purpose is to collect or acquire and conserve copiesof all significant publications published in the country and function as a"deposit

library, either by Law or under other arrangement.Harrods's Librarians Glossary and Reference Book () defines the"National Library as a library maintained out of government funds".Serving the nation as a whole; Books in such libraries being for referenceonly; Libraries are usually copyright libraries; The function of such alibrary is to collect and preserve for posterity, the books, periodicals,newspapers and of the documents published in the country; and Being anagency for purchasing of books published in other country". Thisdefinition highlights the role of a National Library related to the functionsconserving National Library heritage and comprehensive national service (Awana, 2007).

v) Contact Libraries

Contact Libraries have come into existence to removemisunderstandings among the nations and to promote cultural contacts orunderstanding between people of different nations through the use ofbooks.The power of communication of ideas is the most significantachievement inhuman culture which is closely related to social life. It ispassed on from generation to generation either through personal contactsor through recorded knowledge. Thus the culture of the ages treasuredand conserved in recorded documents neither dies nor diminishes, as therecorded documents are stored -Libraries - contact Libraries.Those who believe in the continuityof culture and peace, it isnecessary to remove misunderstanding amongst the nations and topromote cultural understanding through the use of books. Librariesinspire people and impel them to work for the betterment of humansociety. They provide food for thought and inculcate a habit of utilizingthis mental food as a daily consumption in the lives of men/women. Thiswould certainly make a community cultured. The books and ideas haveno boundaries. These should be allowed to flow freely without anyphysical, political, religious or psychological barriers (Anunobi, 2003).

2.2.5 Science Laboratory

A school science laboratory is a place where basic experimental skills are learnt by systematically performing a set of prescribed and suitably designed experiments. Performing experiments by one's own hands is not only a thrilling experience but is also important because it entails learning by doing. It also facilitates understanding the concepts of science. The experiments and project work suggested at the secondary stage intend to develop basic skills of measurement; handling of some common measuring instruments, equipment and chemicals; setting simple apparatus; handling microscope and preparing slides; making observations; collecting data and presenting it in appropriate format; interpreting and drawing conclusions; and preparation of report.

One of the most effective vehicles by which the process of inquiry can be learnt is the laboratory where the students' experience first-hand, the inquiry process. Hager in Amba, Ukwetang and Cecilia (2014), based on the instructional theory of learning interaction, hypothesized that the laboratory had a direct effect on both students' attitudes and academic performance. It is generally believed that constant practice leads to proficiency in what the learner learns during classroom instruction; hence, the dictum 'practice makes perfect'. This has given rise to the expectation that laboratory facilities should be adequately provided to secondary schools for effective teaching and learning.

The study in a laboratory is an integral and essential part of a biology course. Biology laboratory activities are hands-on experiences which emphasis process skills (Dike, 2008) which Agbo (2003) posited as motor skills that help the scientists to find answers to problems and enhance the learning of science. Laboratory activities also encourage students to construct knowledge by interaction with laboratory materials as they solve problems. Ado (2003) further

opined that “it is very necessary that students manipulate materials and equipped in learning of biology through equipment; this will help them not only to acquire science process skills and new knowledge but also scientific attitude such as honesty, open-mindedness and cooperation as moralities of science and enhance understanding and retention of difficult concepts and procedures”. Laboratory facilities give students some basic insight into scientific concepts and leave them with feeling of the reality of science which in turn improves their academic performance in examinations (Habu, 2005).

The Adequacy of laboratory facilities, students’ academic performance and the teaching and learning experiences centre on the extent of adequacy of laboratory facilities in secondary schools; and the teachers’ effectiveness in the use of laboratory facilities with the aim of facilitating and providing meaningful learning experiences in the learners.

In a science laboratory, we usually find working tables, some items of common utility and space for storing equipment, chemicals and glassware. The working tables in a science laboratory are usually provided with:

1. Sinks with water taps for washing purposes and liquid waste disposal. It is expected that the students will use taps only when required and will not waste the water. A regular cleaning of sinks is essential.
2. Reagent columns for keeping bottles of chemicals and reagents of frequent use. These reagent bottles are arranged in a definite order.
3. Heating facilities provided in the form of gas taps fitted with a burner or spirit lamp. A gas tap should be opened only when the gas is required for lighting the burner. Leakage, if any, should be immediately brought to the notice of the teacher or other laboratory

staff. Every laboratory must be equipped with a few fire extinguishers fixed at convenient places.

4. In the science laboratory, the equipment and glassware of common use are stored separately in an almirah. They are generally issued tom the students at the time of performing experiments.
5. In some laboratories, equipment like balances and microscopes may be permanently placed in a place as these are used quite frequently. The type of balance used depends on how accurate the weighing must be and what to balance? At secondary stage, a physical balance is a good choice. Teachers are advised to train students appropriately to use a physical balance before they are asked to perform experiment that requires weighing measurements. For weighing powders or solid materials, one must use weighing tubes or butter paper depending on the nature of the material. The pan of the balance must be kept clean. The microscopes (Fig. 2) must be placed near the window to ensure the availability of sufficient sunlight needed.
6. A water distillation plant should also preferably be installed in the laboratory. However a proper arrangement for water supply and drainage should also be made close to the place of installation of distillation plant. Ensure the water supply through the plant before switching on the electric power.
7. Provision for fuming hood or exhaust may be made in the laboratory for gases.

The Following are Examples of Laboratory Facilities

1. Magnifying lens
2. Sprit lamp
3. Rheostat Test tube
4. brushes

5. Stopwatch
6. Forceps Tripod stand
7. Wire gauze
8. Measuring cylinder
9. Boiling tube
10. Delivery tube
11. Test tube holder
12. Convex lens Concave mirror Beakers Thermometer
13. Slide
14. Round bottom
15. flask
16. Woulfe's bottle Coverslip
17. Petridish
18. Trough
19. Plastic squeeze bottle
20. (wash bottle)
21. Bar Magnet
22. Test tube
23. Crucible tongs
24. H-base burner
25. Galvanometer
26. Laboratory stand
27. Extension
28. clamp
29. Ring
30. Clamp (Laboratory Manual – Science 2018)

Others Common laboratory equipment and glassware includes;

1. Resistance box
2. Test tube stand
3. Needle
4. Spring balance

5. Glass
6. Tube Glass
7. Rod
8. Thistle
9. Funnel
10. Droppers
11. Mortar and pestle China dish
12. Watch glasses (Laboratory Manual – Science 2018)

2.2.6 Classroom

The classroom is a common term associated withformal education. It could be seen and regarded as apower-house in which the success or failure of thelearning process is generated and also sustained(Ezeocha, 1990).According to Oku (2006) the classroom is an importantplace in the school, where the students are broughttogether, and given the opportunity of achieving thepurpose of education and also learn to toleratethemselves. It is a place where teachers organize theirwork, carry out educational plans as well as a placewhere research findings are tested or tried out. Inanother view, Ozuzudefined classroom as aplace where pupils or students gather for teaching andlearning purposes, it holds them together and givesthem ample opportunity for group socializationthrough interacting with one another. From Globalpoint of view, classroom is a place where teaching,learning, acquisition of skills, as well as socializationis imbibed. In other words, the expectation andobjectives of formal education are normallyaccomplished in the classroom.The greatest amount of educational activities in the school, and even in the society takes place in theclassroom. It is where government policies oneducation are implemented to foster desirablebehaviour and attitudes and develop problemsolvingskills.There are different types of classroom whichmay include -

(1) Specially designed room

(2) An art gallery

(3) A studio

(4) Museum

(5) Workshop or exhibition centre

(6) Laboratory

School planning starts and ends with the pupil. The building shouldbe designed to satisfy the pupils/students physicaland emotional needs. His physical needs are met byensuring a safe structure, adequate sanitary facilities,a balanced visual environment, a satisfactoryacoustical environment, and sufficient shelter spacefor his work and play. His emotional needs are metby creating pleasant surroundings, a friendlyatmosphere, and an inspiring environment. This humanistic, pupil-orientedapproach to school planning and construction, viewdesign and equipment as means of enhancing thepupil's learning and comfort.

Furthermore, Asiabaka (2008) maintained that theprimary purpose of the teaching/learning process is tobring about in the learner desirable change inbehaviour through critical thinking. This process nevertheless cannot take place in a vacuum but ratherin an environment structured to facilitate learning.Classroom is the nucleus of this learning environment.Many children spend more of their waking hours in classroomsthan they do at home; within these settings theyare exposed to experiences that, for better or worse,intended and unintended, shape their development. They maylearn to read, write, and think critically; they make friends andhave to face the inevitable challenges of peer relationships; andthey are oriented increasingly to become productive, independentmembers of a larger society. Interest is keen in the extent ofthese effects in classrooms, the methods of producing and reproducingthem at various levels of scale, and understanding themechanisms responsible for them.

2.2.7 Multi-Purpose Hall

Anything multipurpose can be used in many different ways. A multipurpose tool might include a screwdriver, flashlight, and bottle opener all in one.At your school, a multipurpose room could provide space for a music class, an after-school art club, and an area for the debate club's meetings. Multipurpose combines multi, "many or much," from the Latin multus, with purpose,"intention,"fromthe Old French porpos,aim”

The multipurpose hall serves both curriculum activities and recreation activities and it plays a focal role for school and community meetings and gathering. It will shelter the following activities:

(i) Music and theater events, film projections and general assembly of the student body. These events will require a large central space with an audience seated in rows, facing a stage and/ or a screen;

(ii) Sports and games mainly in winter days, exhibitions, teaching in workshops. The events require a large, open, central space with the audience seated along the walls or circulating freely;

(iii) Meetings of the local community, presentation and performances and meetings for parents’ and teachers’ associations.

The form of the new multipurpose hall is a long building ascending southward. The ensemble of buildings, primary school, kindergarten and the multipurpose hall define the structure of the village.The orientation towards the road is significant in so far as it provides the school building and its surroundings with an introverted sense. The roof of the building is intensively planted and lies between the school and the kindergarten.It cuts into the topography and by varying across one storey, forms a gentle slope and walk-on roof, resembling a toboggan run.The visible volume of the building is minimized, the spatial design forms part of the

landscape. The whole of the green space is retained, only the contour lines are redrawn.The natural break in the terrain is emphasized by the connecting path and an architecturally-linked tunnel. The green is claimed by the kindergarten and the school.

The school is connected to the gym by an underground path that is weatherproof and thus easily accessible. Immediately above the tunnel there is a ground level path, connecting the entrance level of the school to the entrance level of the new building.The basement of the new building, including the rehearsal room, is provided with an additional ramp for the delivery of instruments and gym equipment.The foyer of the new building provides a nexus of different functions – a tribune extends the foyer towards the gym building and thus provides an auditorium for events.The southern section of the foyer is extended by the space, opening one's view over the forecourt. The three levels – basement, ground floor, and roof – are multifunctional and animate the building as a whole.The flexible, separable, and lockable units of the building open up according to the requirements of the event, be it the punch and Judy show, indoor football, folklore groups or basement parties, be it one after the other or all at the same time.

2.3 Theoretical Framework

The Theoretical framework adopted for the present study is the resource dependency theorypropounded by Pfeffer and Salancik (1978). The resource dependency theory is the study ofhow the external resources of organizations affect the behaviour of the organization.Elkenberry and Klover, (2004) enumerated the basic features of resource dependency theoryas follows:

1) That organizations depend on resources

2) These resources ultimately originate from an organization's environment

3) The environment, to a considerable extent, contains other organizations

4) Resources are basis of power

Resource dependency theory by Pfeffer and Salancik (1978) cited in Elkenberry and Klover(2004) states that organizations depend on multidimensional resources: labour, capital, rawmaterials, etc. and that though organizations may not be able to come out with countervailinginitiatives for all multiple resources, they must move through the principle of criticality andprinciple of scarcity. Critical resources are those resources that the organization must have tofunction. Mcdowl (2018) opines that resource dependency theory views an organization interms of its resource dependencies with other firms in the environment. He also stated thatresources come in different forms and they are valued depending on their importance andavailability, and they differ in terms of who has discretion and control over them. Explainingfurther, Mcdowl (2018) pointed out that there are various types of resources that firmsdepend on, such as physical materials which might be actual materials that organizations build a product from. They could be technical such as information or knowledge, or socialresources such as prestige or reputation that enables them to survive, all these resources differ depending on its importance. Resources dependency theory differs from a variety of factorsdue to their importance and availability.

The present study adopted this theory because the school system is a social organization thatalso depends on various resources to survive. There is no worthwhile education system thatcan ignore healthy and functional school buildings which are essential to the effectiverealization of its educational goals. The Resources Dependency Theory emphasized theimportance of resources to the organization's continual operation and survival. Relating thisto the school system, it could be construed that schools cannot survive without resources asthere would be no students, if schools cannot survive due to lack of resources; it could behypothesized

that the perceptions of government, policy makers and school administrators onresource dependency should clearly play a large part in their reactions in making rules andappropriating funds for specific educational programmes. The challenge for them is todetermine the extent to which they can and must respond to various demands of schoolprogrammes in respect of school buildings without potentially affecting the entire operationadversely.

The adequate provision of school buildings for effective teaching and learning is based on asound perception of the task to be done which is reflected in the exhibition of behavioralpatterns by all stake holders. This will stimulate teachers and students to attain desired goals.If this is not done, both teachers and learners including school administrators face role strainthat could lead to poor performance in the school system. The researchers believe that if allstakeholders in the school system consider school buildings as valuable assets that are critical

A Hypothesized Model Representation of Pfeffer &Salancik (1978), Resource DependencyTheoryto the achievement of educational goals of the society, provision of adequate school buildingsand its utilization will be given priority. The above theory is illustrated by the model in figure 1below.

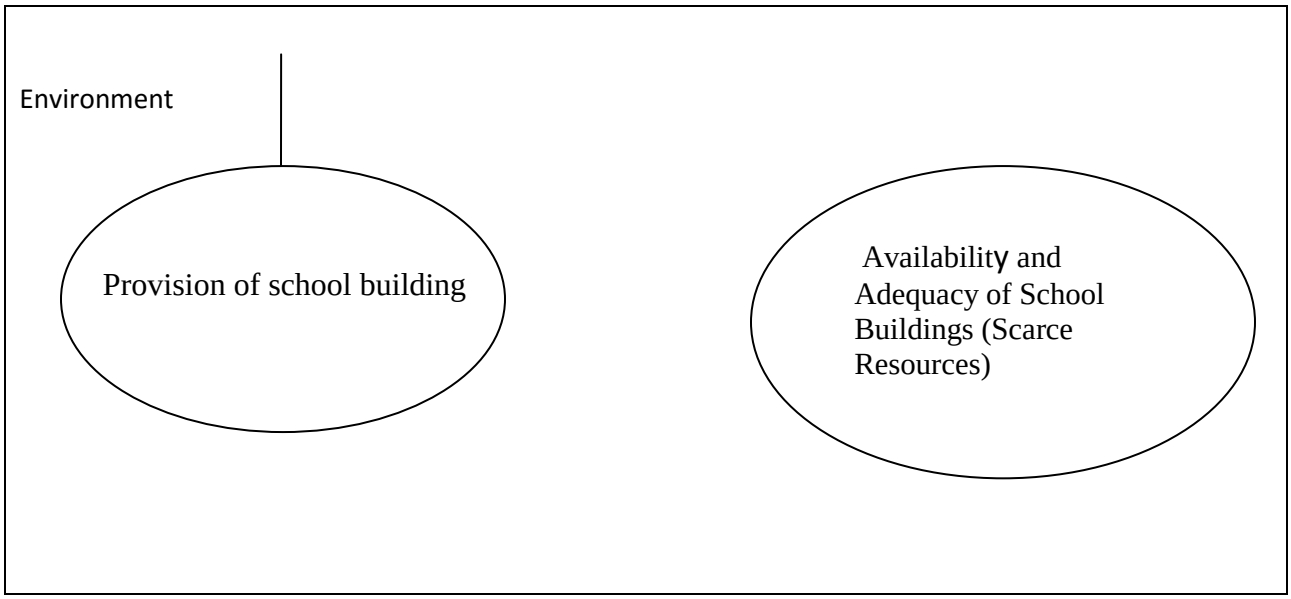


Figure 1: Resource Dependency Theory

From the above model, it is observed that the provision of school buildings will mean havingadequate school buildings which will lead to the conducive environment and consequentlythe products from that environment.

The resource dependency theory concentrates on theimportance of the quantity and quality of resources (school buildings) as the majordeterminant of the products (educated students) of the school environment as was reflected inOlugbenga (1997) that the level of resources available to any educational system and the waythey are used will determine, to a great extent, the performance of that system. Therefore, theeducational system and its productivity depend on the availability and adequacy of schoolbuildings. The studies by Olasunkanni and Odunaya (2012) and Osuji (2016) leans credence to theabove as their studies found out that provision of school facilities and buildings should beconsidered first before mounting an educational programme. It is against this background thatthis study was carried out.

2.4 Influence of School Mapping on Allocation of New Secondary Schools

Universalisation of secondary education denotes two processes. Firstly Access,thismeans universal provision of secondary schools and universal enrolment of children in the agegroup of 14 to 18 group. All children in the age group of 14 to 18 should have access tosecondary schools. There should not be any discrimination on grounds of sex, religion, caste,place, or socio-economic status. Secondly Success: -By simple providing access to secondaryschools we cannot claim that we have universalized secondary education. Along with access toschools we should make adequate provisions in the schools so that children can experiencesuccess in secondary education. Adequate number of trained teachers, qualitative learning andteaching materials, aids and equipment, classrooms, etc. should be provided in each and everyschool to facilitate successful completion of secondary education. Success is to be determined interms of attainment of Minimum Levels of Learning which means most of the students wouldacquire most of the competencies.

School mapping as an integral part of educational planning, involves carrying out a diagnostic inventory and utilization analysis of the school system as it affects the education needs of communities. It uses for its planning purpose, indicators such as participatory rates like enrolment rate at all the levels, radius per school and per child (the average distance a child covers to school) and the projection of future school requirements (Adiele, Obasi & Ohia, 2017).

The other side of the coin in school mapping is the deliberate effort to ensure efficiency in school location and rationalization. This aspect has a more direct implication because it ensures that educational institutions are located where they can be optimally utilized by the clientele. This is based on the fact that a society's population is dynamic, both in structure and behaviour. The continuous rationalization of educational institutions and facilities is in line with demographic changes that are constantly experienced in the society. On the strength of this fact,

Arinze (1991) pointed out that one basic reason for school mapping is to make sure that educational resources are maximally utilized and educational institutions are efficiently run. Hence, the size of the school, utilization rates of educational resources must be properly considered

2.5 Influence of School Mapping on Allocation of Science Laboratories inSecondary Schools

Laboratory has been conceptualized as a room or a building specially built for teaching by demonstration oftheoretical phenomenon into practical terms. The laboratory is thework place of the science teacher. It is a place where practicalactivities are planned and carried out. It contains the resources,equipment and apparatus for science teaching ranging fromeasily consumable supplies to full range of facilities needed for effective teaching and learning of science.Owoeye and Yara (2011) are of the view that laboratory is made mandatory in line with the popular adage that say “seeing is believing” reality in the school setting. Students tend to understand and recall what they see than what they hear or were told. Laboratory is essential to theteaching of sciences and the success of any science course is much dependent on the laboratory provision madefor it. Affirming this, Ogunniyiin Owoeyeand Yara (2011), stated that there is general consensus among science educators that thelaboratory occupies a central position in science instruction. It could be described as a place where theoreticalwork is practicalised, whereas practical in any learning experience involves students in activities such asobserving, counting, measuring, experimenting, recording, observation and carrying out field work. Theseactivities are totally different from the theoretical work which involves listening to talks and taking down notesfrom such talks (UNESCO, 2008).

Laboratory facilities according to Umeh(2006) refers to facilities thatcan be used to enhance or improve educational programmes and promote teaching and learning. Umeh (2006) “further categories science laboratory facilities into human or material. The human resources have to do with personnelsuch as lecturers/teachers, laboratory technologist/assistants and students”. The science laboratory materialresources are those materials available to the science teacher for teaching and learning. They includetextbooks, computers, thermometers, fire extinguishers, first aid kits, oven, incubators, chalkboards, model/mock-ups, television, radio and other electronic devices(Musah&Umar, 2017). The facilities may be available and adequate but may not be put to use by the teachers. Umeh(2006) is of the view that audio visual aids in most of computer lab in Yobe state are not utilized in schoolsdue to lack of knowledge on the proper use of such resources for teaching.

The provision of adequate laboratory facilities made science learning easier because students can actually learn through practical and interactive approaches. Laboratory works stimulates learners’ interests as they are made to personally engage in useful scientific activities and experimentation; promotes that science is not only products or process; affords the learner the basic skills and scientific method of problem solving. Furthermore, knowledge obtained through laboratory work promotes long term memory.Laboratory helps to provide a forum wherein the learner is given the exercise to subjects, his beliefs, ideas, statements, theoretical propositions etc. (Pareek, 2013).

The science laboratory has a direct effect on both students’attitudes and academic performance as per the instructionaltheory of learning interaction. It is generally believed thatconstant practice leads to proficiency in what the learner learnsduring classroom instruction; hence, the dictum “practicemakes perfect” Hager in Pareek, (2013). The quality of teaching

andlearning experience depends on the extent of the adequacyof laboratory facilities in secondary schools and the teacher'seffectiveness in the use of laboratory facilities with the aim offacilitating and providing meaningful learning experiences inthe learners.

With regard to students being allowed to use the equipment directly in the school laboratory Pereek (2013) found that about 70% of the teachers responded that they werenot allowed to use. Only 22% of the principals stated thatlaboratory was not being used by secondary stage students.This was true as 73% of the students had not done anyexperiment on their own, whereas the rest of the students hadperformed experiments such as litmus paper, use of pH paper,and lime water test. When the principals were asked aboutthe alternative arrangements that were made to overcome theproblem of non-availability of science laboratory in school, 17% of them responded that they use higher secondaryschool laboratory or arrange demonstrations and 30% ofthem carried out experiments in the class. He further established that by very low extent do students involved in conducting the laboratories activities while 33.33% of the teachers had responded that it is high, 20.83% of the teachers have opined that it is moderate and the remaining (30%) teachers opined that the involvement of thestudents has been low.

Laboratory facilities are provided for the students, when these students are not allowed to directly use the facilities as found by the previous study (Pereek, 2013), on the account of misuse, the purpose of such facilities can never be actualized. Adekunle (2014) reported similar to this, he found that computer lab is not being used for instructional purposes rather than covered on the notion that the students will misuse the facilities. He maintained the main reason for not allowing students to used laboratory related faculties poor management system.

For science teachers to play their roles inteaching science, laboratory facilities should be available and used appropriately to improve theperformance of students.Researchers such as Oladare, Abiodun and Bajulaiye (2006); Lavrenz (2006); Akpan (2006), Inyang (2006), Adesoji (2008); and Ihuarulam (2008) stated that there are inadequate resources for teaching andlearning of science subjects in public secondary schools in Nigeria. They further stated that where there are little resources at all, they are not in good condition, while the few ones that are in good condition arenot enough to go round and also the few available materials are dysfunctional.Empirical studies conductedin relation to resource utilization in education have revealed that essentialfacilities are not always available in schools. This inadequacy of teaching resources has been of serious concern to educators (Kennedy, 2009). Lyons (2012), states that learning is a complex activity thatinvolves interplay of students‟ motivation, physical facilities, teaching resources, skills of teaching andcurriculum demands. The process of managing and organizing resources is called resource utilization.The utilization of resources (laboratory facilities) in education brings about fruitful learning outcomes since resources stimulate students learning as well as motivating them.

School mapping is therefore a systematic rational process of determining the location, spacing and rationalization of educational institutions of various types and levels to ensure the setting up of a school network that will meet in the most efficient and equitable way possible, the future demands of education. The school map and the school plant are therefore the physical expression of a society's educational goals, objectives, programmes and projects. The determination of institutional network and the development of school plant must be the consequence of defined educational goals, objectives, programmes and projects. When the reverse is the case, it amounts to putting the cart before the horse (Obasi & Ohia, 2017).

2.6 Influence of School Mapping on Allocation of School Library in Secondary Schools

Another aspect of school plant is library known to be collection of books and instructional materials systematically organized for reference, studying and reading. In other words, a library is an information centre, consisting of books and non-book materials. Okoro (2003) opines that a library can be regarded as the home of knowledge, the house of all reading materials, the area where necessary information are obtained and laboratory of all laboratories. Olakunri (2001) postulates that library is one of the most important sources of information. It could be said to mean according to him that it is the melting pot of information flow in modern society. Idoko (2005) asserts that, library is the centre of intellectual activities for both the teachers and the students. From the foregoing, one can deduce that, library is the academic life wire of the school.

To achieve the above objective of establishing library depends on how well the libraries are equipped in terms of books, journals, sitting facilities, computers, periodicals, newspapers among other facilities. If the school library is properly organized and used, it encourages students' interest in reading and learning while it helps the staff in their teaching, research and professional development. Effective teaching and learning can only take place in a school that has a well-stocked library.

Federal Republic of Nigeria (2004), in her National Policy on Education advised every state ministry to provide funds for the establishment of functional libraries in all the educational institutions in accordance and to train library assistants and librarians for this service. The questions here are how many secondary schools in Nigeria have functional libraries? And what is the state of libraries in our secondary schools? Alibi (1993), in his survey, revealed that what obtain in most of the libraries in the country are plans at one time or the other to automate their

services and these plans are sometimes abandoned due to lack of fund. He further found out that many of the existing libraries are skeletogenous containing mould books, periodicals and government free handouts. In other words, there is large scale decadence and neglect of the library system nationwide. Otonti cited in Agbonye (2006), observed that most schools, especially in South-East States of the nation have no library facilities with which students and teachers can widen their knowledge. He decried that students rarely form the habit of reading anything beyond their textbooks and notes.

A library may meet user's information needs byacquiring, organizing and making available relevant information resources backedby appropriate facilities and delivered by means best known to them, which couldbe manual or through Information and Communication Technologies (ICTs). Forany public library to perform well and meet the needs of the users on this moderntime, it is necessary for the public library to embrace the use of information andcommunication technology. The role of ICT in the effective utilization of librarieshas beenstressed in literature, particularly in academic libraries. In a surveyconducted by Ojo and Akande (2005), it was gathered that students use internetsources and e-mail more than other sources. Other electronic informationresources used by students in the order of importance include CD-ROM, e-Journal, etc.

Library facilities are those facilities required to be acquired by the library for effectiveness of library services. The availability of these facilities can have a strong impact on knowledge sharing among staff since it will add value to their service delivery. Correlation among the library facilities and knowledge sharing is even more crucial and important for the libraries know the strength and weakness of their resources. In other words, this implies that if facilities such as current printed materials, printers, internet/email, multimedia projectors,

CDROMs, air conditioners/fans are adequately available in the library it will eventually create a conducive working environment for the staff and enhance their job performance. Libraries generally capture, preserve and disseminate information resources of scholarly interest. Majority of academic libraries are being empowered and enriched today by these facilities. These resources not only add value to library services, but serve as a motivational instrument to perform their duty effectively. A library with well-organized facilities encourages the users to locate and borrow physically available resources. This also helps users to browse and search catalogues, access databases, perform real-time interactions in the social space. Therefore, the library facilities are invaluable in meeting the best academic and research needs(Wang & Noe, 2010).

A lot of academic information can be received using electronic resources bothinside and outside the library. This may be the reason why they are more popularcompared to other resources. However, lack of computer and IT skills, timeconsuming, limited access to computer terminal and too much information retrieval,using electronic resources, often detracts from doing work (Ojo & Akande 2005).These challenges among users may deter them from using electronic informationsources. To this Omekwu (2001) stated that the success of online searchingdepends on the ability of the user or the information scientist to perform the searching the best possible way.

However, the performance of libraries has been hindered by:

i. Lack of infrastructure.

ii. Lack of adequate finance. Danuta (1996) asserted that finance is a majorresource for organizational effectiveness and without it nothing meaningful will beachieved. It should be borne in mind right from the onset that computerization oflibrary operations like acquisition and

circulation control is an expensive venture,and a time consuming process. Also, Ikem and Ajala (2004) noted that the problemof funding is the major constraint of ICT application in libraries. According to them,the problem of funding is more than just acquiring the hard and software but updating and maintenance are very crucial in order to sustain it.

iii. Unavailability of local communication experts and computer communicatinginternally. Testing and installation of gadgets in a computer-based system, skilledand experienced personnel are needed on a permanent basis who can convert theexisting manual bibliographic data into machine readable form.

iv. Installation and maintenance involve foreign currency limitations, bad telephonelines, and reluctance of telecommunication officers to license moderns. Moreovernetworks have their inherent problems which sometimes affect the decision ofindividual and organizations.

Orgeron (2005) while stressing the usefulness of theacademic library states that "the library is a very naturalcomponent to academic support services now complementingtutoring, career decision making and writings across thecurriculum". The functions of the academic library show howimportant it is in the educational process. An adequatefunctional library is not only aimed at meeting the teachingand study needs of the patrons, but also to meet theessential conditions of research, without which there may beno additions of human knowledge. The library obviouslysupports the institution in the process of developing aninquiring mind. Ray (1990), described the library as arepository of knowledge and that no meaningful teaching-learningand research can take place without it. Also, thelibrary is regarded as the house of knowledge. It is the "nervecentre" of educational institution and that is why researcherswho are involved in teaching, learning and research should beconversant and exposed to the library to know how to use theresources of the library with minimal difficulty.

2.7 Influence of School Mapping on Allocation of Classrooms in Secondary Schools

To promote a proper atmosphere for effectiveteaching and learning, the physical environment of theclassroom must be harnessed. The physicalenvironment is made up of desks, chairs, tables, space,instructional materials, lighting and ventilation as wellas the latest Information CommunicationTechnology (ICT) equipment& library. Othersinclude chalkboard, projection screen, time table,power supply gadget, students and teachers who havecome together for the purpose of teaching and learning.Classroom as a facility is one of key measures ofquality as it determines the students-teacher ratio ofany educational system. The availability and stateof the classroom plays a key role in facilitating orengendering the teaching-learning process (Ahunanya&Ubabudu, 2006).

Starting from the facility need of the student suchas writing and reading materials, to that of theteacher's need to carry out class" activities, a lot ofmoney will need to be spent for the facilities required for quality learning. School/Classroom facilities areamong the resources required in the realization ofeducational aims and objectives. Therefore, theprocess of achieving educational goals and objectivesdepends on school plants planning as well asmaintenance (Adegbeson, 2007).Knezevich (1995) maintained that physical facilitiesare essential resources that are required for theeffective operation and maintenance of standardin the classroom/schools. These facilities include thesite of the building, furniture, equipment, personnelresources, laboratories, workshops and otherinstructional aids. When these categories of schoolfacilities are adequately provided, the classroom activities become effective and efficient. Adequatefacilities in the classroom/school enhance the comfort,safety of pupils/students and teachers, therebyincreasing their performances.

School/Classroom facilities are the material resourcesprovided for staff and students to optimize theirproductivity in the teaching and learning process.The realization that the transfer of knowledge does notonly take place in the four walls of the classroom fromthe teacher to the students but rather that learningtakes place through discovery, exploration,interaction with the internal and externalenvironment has necessitated the creative andinnovative development of teaching and learningfacilities that reflect these changes.In the classroom enough desks, chairs, lockers,instructional aids as well as ICT materials etc. must beprovided to match with the population ratio of notmore than 1:30 students i.e. one teacher to thirtystudents. This will make for efficiency on the part ofthe teacher and good performance on the part of thestudents. The quality of products (students/pupils) bears a direct relationship with the quality of facilitiesdeployed in the process of production. This impliesthat adequate human and material facilities must beprovided in the classroom to prepare the pupils/studentsfor life in the larger society.The orchestration of classroom life which include planning curriculum, organizing procedures andresources, setting the tone of the class environmentto maximize learning, monitoring student progress andanticipating potential problem is necessary (Ijeoma, 2007).

Akubue (1991) stressed that the successful teacher isone who has "mastered specific techniques forplanning an optimal number of meaningful activitiesand for creating an enriched inviting environment".Clearly the teacher has an important role to play infashioning a conducive learning environment forstudent academic achievement.It is very necessary that we appreciate and developthe need for maintenance culture in theclassroom/school environment. This can be achievedthrough effective implementation of managementprocesses - planning, organizing, coordinating,controlling, inspecting and supervising both staff andmaterial resources is essential. This implies thatfacilities management is a collective responsibility offederal, state, local

government authorities, staff andstudents of the individual classrooms/schools and thecommunity where the schools are located.

Apart from the regular classrooms, Okeke (2013) listed other types of classroomsto include; specially designed room, an art gallery, a studio, museum, workshop or exhibition centre and Laboratory. In the classroom enough desks, chairs, lockers,instructional aids as well as ICT materials etc. must beprovided to match with the population ratio of notmore than 1:30 students i.e. one teacher to thirtystudents. This will make for efficiency on the part ofthe teacher and good performance on the part of thestudents. The quality of products (students/pupils) bears a direct relationship with the quality of facilitiesdeployed in the process of production. This impliesthat adequate human and material facilities must beprovided in the classroom to prepare the pupils/studentsfor life in the larger society (Okeke, 2013). Classroom/Schoolfacilities management is the application of scientificmethods in the planning, organizing, decision-making,coordination and controlling of the physicalenvironment of learning for the actualization of theeducational goals and objectives. Human and materialresources are deployed for this purpose.The structure of classroom should eliminate all barriers both externally and internally to learning such as noise and distraction. The number of human being sheltered by the classroom justify why the foundations of the classroom should be extra strong and stable.

According to Gometi (2011) school facilities include the school buildings, classrooms,accommodation, libraries, laboratories, furniture, recreational equipment, apparatus and otherinstructional materials, their availability, adequacy and relevance to academic achievement.In the same vein, Owoeye and Yara (2011) stated that unattractive school buildings andovercrowded classrooms among others contribute to poor academic achievement in theschool

system. Classroom space is very important to 21st century learning such that thestudents can work in teams, solve problems and communicate effectively (Turupere, 2016).

Overcrowded schools and classrooms have been linked consistently with increased levels ofaggression in students. This is associated with decreased levels of student engagement anddecreased levels of learning. Classrooms with ample space are more conducive to providingappropriate learning environments for students and are associated with increased students'engagement and learning. The availability of school buildings in the context of this studyrefers to the physical structures available for the school programme, while adequacy ofschool buildings refers to the extent to which the available buildings and instructional spacesmeet the quantitative and qualitative requirement of the educational programme. Thiscoversthe size, shape, number, and quality of the instructional space (Gometi, 2011).

The scope of school mapping covers the following specific areas for expansion and improvement of facilities: 1. Rationalization of existing facilities by the following: (i) shifting, closure or amalgamation of institutions (ii) optimum utilization of teaching and non-teaching staff (ii) optimum utilization of buildings, equipment, furniture etc. 2. Provision of new or additional facilities by the following: (i) opening of new schools or upgrading of existing ones (ii) providing additional teaching and non-teaching staff (iii) providing new or additional buildings, furniture and equipment in institutions (Sabir, 2013). It therefore implies that it is a potent instrument that can be used to provide classrooms to schools where they are needed and can be used to ensure other schools that need classroom upgrading.

2.8 Influence of School Mapping on Allocation of Multi-Purpose Hallin Secondary Schools

Students need places to transact student affairs or to gather for social purposes. Teachers need office space, conference rooms for team planning, facilities for diagnosis of pupil's needs, and facilities for preparing instructional presentation. New views of the teaching-learning process that move beyond memorizing of knowledge toward involvement of students in applying, analyzing, synthesizing, and evaluating knowledge stress the need for flexibility of space in the schools. The complexity of the learning environment requires flexibility in the design of the school plant. Modern facilities are designed for diverse academic and social activities.

Multipurpose facilities used for academic activities during school hours, may be available for community use during or after school hours. Such facilities may be used for continuing education programmes, social activities and recreation. Through appropriate scheduling, multipurpose facilities may be accessible to the community during school(Asiabaka, 2008). These are facilities that can easily be converted to uses other than those for which they are being used. Suchfacilities in most cases are made of space facilities. There are basically two types of open space facilitiesnamely: The developed and the undeveloped spaces. Developed Open Space are spaces used as sportingpitches, fields, lawn ,school farms, access roads, parking lots and so on. Their uses can easily be modifiedas occasion demands. The Undeveloped Open Spaces are all the land area within the legal authority of theinstitution which are yet to be developed into specific uses.

2.9 Empirical Studies

A study by Pereek (2013) explored the availability and utilization of a science laboratory for the teaching and learning of science. The study was a joint collaboration with India's Ministry of Human Resource Development, the Government of India, and the National Council of

Educational Research and Training. The study adopted descriptive survey methodology and random sampling. The instruments used for the study were questionnaires for principals, teachers, and students. The study's findings revealed that in most participating schools there were no separate science laboratories. It was also found that many teachers faced difficulties when conducting science activities due to the large number of students in each class as well as inadequate equipment and materials. The findings highlight that as there was no assessment of science laboratory practical activities, these activities did not contribute directly to the measurement of students' academic performance in science. The study suggested that governments should support laboratory practical activities in science as a part of assessment and specifically for this study's context takes immediate steps to set up science laboratories in all schools for the effective teaching and learning of science. The study specifically focused on one component of the present study which is laboratory facilities in boarding secondary schools. The study is also similar to the present study as both focus on management and utilization of the laboratory facilities. The previous study location is India while the present study location is Kaduna State, Nigeria. Furthermore, the present study is wider in scope than the previous which is limited to laboratory facilities but included, dormitories, library, classroom, water and light supply facilities and their supporting facilities

The study conducted by Dike and Salisu (2015) was designed to find out the availability and utilization of laboratory facilities and their implication in the performance of students in Biology in Senior Secondary Certificate Examination (SSCE) in Zaria metropolis of Kaduna state. Random sampling technique was used to select 5 senior secondary schools from the 12-government senior secondary schools in the study area. The sample comprised 400 students selected from 5,423 students and all 16 science teachers of the selected schools. The study adopts

the survey design. The instrument for the study tagged Secondary School Laboratory Facilities Questionnaire for Teachers and Students (SSLFQT and SSLFQS) were constructed by the researchers. The instrument was considered to be standard, valid and reliable. The research questions were answered by the statistical mean while the hypotheses were analyzed using the chi square and its cross-tabulation statistics. The findings of the study revealed inadequate availability and utilization of laboratory facilities in the senior secondary schools. Inadequate laboratory facilities affect meaningful teaching and learning in schools and hindrance to academic performance and hence the significant relationship between the laboratory facilities and the performance of students in Biology in the SSCE as revealed by the findings. It was recommended among others that the laboratories in the senior secondary schools should be equipped by the government in conjunction with the stakeholders and the teachers adequately trained on the effective utilization of the facilities through in-house training for enriching tomorrow.

Similarly, Nkwalla (2014) studied the effects of library services on the academic performance of students in English Language in Kenya District Schools. The study has the following objectives; find out schools with good library services in Kenya District Schools, Access effects of poor library services on students' academic performance in English Language in Kenya District Schools, Examines the schools without library services and its effects on English language students' academic performance in Kenya District Schools and Assess the usage of library services by students and its effects on English Language students' academic performance in Kenya District Schools.

Descriptive survey design was used with 300 respondents 150; students from schools with good library services and 150 students from schools without library services. Systematic random

sampling was used for the sample while Pearson's product correlation was used as the statistical tool. The researcher's findings include; the significant relationship between numbers of hours students spent in the library and how it affects students' academic performance in English Language in the schools with good library services.The students perform better than those without good library services and that the more hours the students spend in the library the more they improve their academic performance in English Language. The research is relevant to the current study in the following ways; it serves as a research guide to the study; hence it has a correlation with students' academic performance.

Ahmad (2014) carried out a study on evaluation of provision and maintenance of infrastructural facilities in boarding secondary schools in Yola metropolis, Adamawa state. The primary purpose of the study was to evaluate the provision and maintenance of infrastructural facilities in boarding secondary schools in Yola metropolis. The study was a survey research. It covered all the boarding secondary schools in Yola metropolis. Analysis of variance F-test (ANOVA) was used to analyse the data collected, while statistical package for social sciences (SPSS) was used to generate frequency and percentage of the scores. The result showed that classroom facilities are adequately provided and maintained by the school managers, laboratories/ workshops were not well equipped and maintained.The finding also showed that libraries are provided while accommodation facilities are not enough for both staff and students etc. The findings therefore concluded that provision and maintenance of infrastructural facilities in boarding secondary schools in Yola metropolis (Adamawa state) are grossly inadequate. The study made some recommendations, such as; Adamawa state government should provide boarding secondary schools with infrastructural facilities, school managers should ensure proper and regular maintenance of school infrastructural facilities among others.

Auta (2012) conducted a research on impact of school facilities on teaching and learning in Nigerian Air Force Secondary Schools. This study examined "Impact of School Facilities on Teaching and Learning in Nigerian Air force Secondary Schools". The study was set out to achieve the following objectives: Assess the impact of supply of electricity on teaching and learning in Nigerian Air Force Secondary Schools, Find out the impact of supply of pipe borne water on teaching and learning in Nigerian Air Force Secondary Schools, Identify the impact of provision of classrooms on teaching and learning in Nigerian Air force secondary schools and to determine the impact of provision of laboratory facilities on teaching and learning in Nigerian Air force secondary schools. The purpose of this study was to find out how electricity, pipe-borne water, classrooms and laboratories have impact on teaching and learning in Nigerian Air force Schools. Four research questions were asked and four null hypotheses formulated and tested using ANOVA at 0.05 level of significant. The research design adopted in the study was descriptive survey. Structured questionnaire was designed by the researcher and administered in Air force Secondary Schools Kaduna, Jos and Port Harcourt. The major findings of this study revealed that hypotheses one and two retained while the third and fourth hypotheses were rejected. Based on the findings, it was recommended that Nigeria Air force directorate should make effort to supply electricity at all times in schools, provide enough classrooms and other facilities in all the Nigerian Air force Schools.

Sani (2007) investigated the relationship among school plant construction, utilization, and maintenance and school effectiveness in Kebbi state secondary schools in Nigeria. He used stratified sampling technique to select 26 out of 41 secondary schools, deliberated sampling technique for all the principals and proportionate sampling technique to select 587 out of 850 teachers in the selected schools. He used a combination of WACE result Analysis format,

observation inventories and questionnaire to generate both quantitative and qualitative data. He applied multiple Regression and Pearson Correlation Coefficient to test his hypothesis. He found that there was a significant, positive and high relationship between school plant maintenance and students' academic performance, students conduct and school community relations with calculated r- value of 0.99, 0.98, and 0.97, respectively.

In the work of Abdulkareem (2003), he carried out an analysis of the provision and management of facilities in Kwara state secondary schools. The study was a descriptive survey carried out export factor. It covered all the 1078 public secondary schools in 16 local government areas of the state. Questionnaire and interview technique were used to collect relevant data. Descriptive statistical technique was used to analyze the collected dada to answer the six research questions raised to guide the study. The result showed that school facilities were inadequately provided and where some of these facilities were provided, they were inadequately managed. Maintenance was the most prevalent practice in the schools. Based on these results, it was recommended that parents and non- governmental agencies should complement government efforts at providing school facilities, while pupils, teachers and school heads should be involved in the management of these facilities.

Isaac and Musibau (2010) Conducted a research work on School Plants Planning and Students' Learning Outcomes in South West, Nigeria Secondary Schools , the study examined the relationship between school plants planning and secondary school students' learning outcomes in south-west, Nigeria, found out the levels of school plants planning and learning outcomes of students' in secondary schools. The study also investigated the relative contributions of school plants planning components to students' learning outcomes. A descriptive research of the survey design was used in the study. The population consisted of 8250 comprising of 750 principals and

7500 teachers. The sample consisted of 1650 respondents comprising 150 school principals and 1500 teachers. Multistage, stratified and simple random sampling techniques were used to select the sample. Data collected were analyzed using frequency counts, percentages, and means. Pearson Product Moment Correlation. Multiple regression and F-ratio. The two null hypotheses formulated were tested at 0.05 level of significance. The study revealed that the levels of school plants planning and students' learning outcomes were relatively high during the period under investigation. The study also revealed that school plants planning and its components such as school site planning, instructional space planning and circulation space planning were significantly related to students' learning outcomes. Moreover, administrative space planning and space of convenience planning were not significantly related to students' learning outcomes. Based on the findings, it was recommended that government should continue to lay more emphasis on school plants planning particularly in the areas of school site planning. Circulation space planning and instructional space planning in order to improve students' learning outcomes.

Agbonye (2006) conducted a survey research on school buildings in secondary schools in Imo state. The aim of the study was to find out the adequacy in the provision of secondary school buildings in Imo state. Five research questions and four null hypotheses guided the study. Descriptive survey design was adopted for the study. A sample size of six hundred and fifty was selected and used for the study. The instrument used was questionnaire. Mean scores and standard deviation were used to analyze the data and answer the research question while the t-test statistics was used to test the null hypotheses. The result showed that school buildings in Imo state are not meeting up with the population of student and the buildings are not in good condition. The study is related to the present study in the sense that while Agbonye's study

investigated the status of school buildings, the present study will go further than just the status. It would proffer strategies for securing school buildings.

Joseph (2015) The study title the effects of school location on learner's academic performance: a case of community secondary schools in Makambako town council, Njombe Tanzania is set to determine the extent to which distance affected the academic achievement of students in community secondary schools in Makambako Town Council. The study was guided by four specific objectives namely to investigate the extent to which school location affects the academic achievement of secondary school students in Makambako TC, to find out factors that determined location of community secondary schools in Makambako TC, to determine conditions used to allocate pupils to secondary schools, and Appropriate strategies to improve secondary school students' performance. A descriptive survey design was used in the study. A population of 2140 comprising of 120 teachers, 20 education officers 2000 (800 boys ad 1200 girls). 214 was used as sample comprising 12 teachers, two educational officers, and 200 (80 boys and 120 girls) students. These study respondents were sampled through simple random and purposive sampling technique was used to select the sample. Data collected were analyzed using frequency counts percentages, means, Pearson Product Moment Correlation, multiple regression and F-ratio. The study determined that longer distance travelled by students to school made them reach schools late and with empty stomachs. Location of school has led to mass failure to most of students, due to long walk among students have cause dropout from school and most of girls' student get pregnancy thus fails to attain their educational goals. Community secondary schools will continue performing poorly academically if there is no effort done to improve the provision of education to community secondary schools in Makambako Town Council.

Another study by Mhiliwa (2005) investigated the effects of school location on learner's academic performance: A case community secondary school in Makarnboko town council, Njombe. The study is set to determine the extent to which distance affected the academic achievement of students in community secondary school on Makambako town council. The study adopted descriptive cross-sectional study design. The population of the study included all community secondary school students, teacher, head of the community secondary school districts education officers and community members from the selected community in twelve(12) schools, purposive sampling and simple random sampling techniques were used for the study to select 200 students,8 teachers,40 parents/guardian's and 2 educational officers. The instrument used was interview, questioner data collections were analysed using statistical tool SPSS version17 and inductive analysis procedure were employed. The finding revealed that longer distance travelled by students to school made them reach school late and with empty stomach. Location of school has led to mass torture to most students due to long work among student have caused dropout from school and most girls get pregnant thus fails to attain their educational goals.

Nwankwo (2007), conducted a survey research on school buildings and maintenance in Anambra state. The purpose of the study is to make an assessment of the status of existing buildings in secondary schools in Anambra state. The population was one hundred and fifty principals. Random sampling was used to select one hundred principals. The instrument used was questionnaire, the result showed that, the condition of secondary school buildings is very poor and the impression gained is that across the board approximately 75% of the buildings is in very poor condition with the major problem of poor and often no maintenance. Nwankwo's study stopped at presenting the conditions of schools buildings without proffering solutions on how to maintain the school buildings. This gap is filled by the present study.

A study conducted by John and Ogondiek (2018) was on School Mapping and Micro-Planning in Educational Development: The Tanzania Educational Management Perspectives. The general objective was to probe the role of school mapping and micro planning in educational development. Specific objectives were: Assessment of implementation process, examination of the educational development achievements and determining challenges of implementing school mapping and micro-planning. Survey research design, qualitative and quantitative research approaches were employed. Purposive and random sampling techniques were used to get required number of respondents (N=94. Data collection methods used were interviews and documentary review, instruments used were interview questions, questionnaires and documentary review guide. SPSS and Microsoft excel were used during data analysis. The study revealed the implementation process of school mapping and micro-planning did not involve the rationalization of existing facilities, the creation, shifting, closure or amalgamation of institutions. The council failed to optimally utilize teaching and non-teaching staff, buildings, equipment and furniture and did not provide on job training to employees. The council increased enrollment and attendance of students and decreased incidents of students dropping out. The council lacked effective stakeholders' participation, economic and funding uncertainties and increased teacher work-loads. The recommendations are: KDC to improve qualities of existing facilities through regular repair and maintenance, optimally utilize teaching and non-teaching staff as well as buildings, equipment and furniture and improve teaching and learning environment: The government to equitably distribute educational resources and stakeholders effectively participate and further research to be done on the effect of implementation of country wide educational development campaign on the school mapping and micro-planning.

2.10 Summary

This chapter is concerned with the review of related literature to the study. Relevant literatures were therefore reviewed under the following sub-headings;Conceptual Framework, Assessment, School Mapping, School Plant, School library, Science laboratory, Classroom,Multi-Purpose Hall, Theoretical framework, influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of science laboratories insecondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of school library in secondaryschools in Kaduna state, Nigeria, influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of multi-purpose hall secondary schools in Kaduna state, Nigeria, Empirical Study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses methods employed by the researcher to carry out the study. these include;Research Design,Research Population,Sampling and Sampling Technique, Instrumentation, Validity of the Instrument, Pilot Study, Reliability of the Instrument,Procedure for Data Collection andMethodfor Data Analysis.

3.2 Research Design

The study is a descriptive survey research."It is usually employed by collecting data and describing in systematic manner the characteristic features or facts about a given population from a few people or items considered to be representative of the entire group" (Salihu and Adamu 2016:1470). According to Muhammed and Salihu (2015) survey research is interested in some characteristics of the population or universe and uses a carefully selected sample from the population for intensive study of the characteristics of the population.This design is considered appropriate because it provides modalities for gathering information from the respondents using questionnaire.In the same vein, Asiabaka (2001) and Abiola (2007) opined that survey design is a very useful means of obtaining data through the use of questionnaire. This research design was therefore appropriate for this study since questionnaire was used as instrument for data collection.

3.3 Research Population

The study's population consisted of principals, teachers and supervisors numbering 10,931. This comprises of 541 principals, 10,294 teachers and 96 supervisors from twelve (12) educational zone in Kaduna State.The distribution of the population is shown in Table 3.1

Table 3.1: Population of the Study

S/N	Education Zone	Principals	Teachers	Supervisor	Total
1.	Godogodo	36	477	6	519
2.	Lere	44	479	7	530
3.	Zaria	48	1524	8	1580
4.	Anchau	67	858	7	932
5.	Rigachikun	30	435	5	470
6.	Zonkwa	51	678	8	737
7.	Kachia	56	573	8	637
8.	Giwa	33	628	12	673
9.	Kafanchan	52	1256	12	1320
10.	Kaduna	37	1762	10	1809
11.	B/Gwari	21	178	5	204
12.	Sabon Tasha	66	1446	8	1520
	Total	**541**	**10294**	**96**	**10931**

Source: Ministry of Education, Science and Technology. Kaduna State (2018)

3.4 Sample and Sampling Technique

The study has a sample size of 378 which comprise of 40 principals, 326 teachers and 12 supervisors. This sample size was obtained by relaying on the research advisor (2006).Simple random sampling technique was used to select 4 education zones of out of the twelve education zones in the state; namely Kachia, Kaduna, Sabon Tasha and Zonkwa education zones; which represent 30% of the twelve Education Zones.Ten principals were chosen from each of the education zones, while 3 supervisors were chosen from each the zones. However, the reason why purposive sampling technique was employed to select the respondents in the study was due to the fact that the technique is judgmental in nature, being a non-probabilistic sampling technique instrument.Proportionate sampling distribution was further deployed to share the sample size among the teachers according to their population. Details of the distribution is presented in Table 3.2.

Table 3.2: Sample of the Study

S/N	Education Zone	Principals	Teachers	Supervisor	Total
1.	Kachia	10	45	3	58
2.	Kaduna	10	100	3	113
3.	Sabon-Tasha	10	95	3	108
4.	Zaria	10	86	3	99
	Total	**40**	**326**	**12**	**378**

3.5 Instrumentation

The instrument used for the study was self-designed questionnaire meant to elicit responses from respondents on Assessment of School Mapping on allocation of School facilities in Secondary Schools in Kaduna State, Nigeria. The questionnaire wasin six sections A-F. Section A wasdesigned to seek personal information of the respondents such as; status, gender, qualification. Section B-Fare item statement onassessment of school mapping on allocation of school facilities in secondary schools in Kaduna State, Nigeria.The questionnaire was on 5 Likert scale rating of Strongly Agree (SA), Agree, (A), Undecided (UD), Disagree (DA), Strongly Disagree (SD).

3.5.1 Validity of the Instrument

The validity of the instrument was determined by the researcher's supervisors and other experts in the field test and measurement. The initial draft copies of the questionnaire, objectives of the study, research questions and hypotheses were given to the supervisors. These experts critically examined the items in relation to content relevance, appropriateness of statements, the clarity of words, and length of statements in relation to the objectives of study. They also make other necessary comment(s) towards ensuring that the instrumentwas adequate and relevant to the study. However, useful input such as reframing of the items, deleting of irrelevant items and

simplifying some ambiguous items made were incorporated to arrive at the final certified copy of the instrument.

3.5.2 Pilot Study

The pilot study involves the preliminary investigation of a research with relatively small sample before the main study. This is usually done to pre-test the research instrument and correct all observed anomalies before the main study (Alasuutari, Bickman and Brannen, 2008; Welman, Kruger and Mitchell, 2005). The purpose of a pilot study is to enhance the reliability, validity and the practical application of the questionnaire (Cohen, 2008). A pilot study wasconducted in three secondary schools within Kaduna metropolis. 30 questionnaireswere used for the study. A test retest method was used at interval of two weeks. The schools used are, Government Day Secondary School Kakuri, Government Day Secondary School Narayi and Government Day Secondary School Kakau.

3.5.3 Reliability of the Instrument

The data collected from the pilot study was subjected to statistical analysis ofPearsonProduct Moment Correlation Coefficient (PPMCC) at 0.05 level of significance. A reliability coefficient of 0.67 was obtained. This is in agreement with the opinions of Maruf and Aliyu (2003) that a reliability coefficient of 0.7 and above is generally considered to be good and reliable. The study adopted the 0.64 as the minimum threshold for accepting the reliability strength of the instrument as set by Danjuma and Muhammad (2011). Hence, the instrument was adjudged as adequate for the parent study.

3.6 Procedure for Data Collection

The researcher presented an introductory letter from the head of department to help him get necessary information from the respondents, this was through personal visit to the principals, teachers and supervisors of the selected secondary schools. The researcher used research assistant to assist in the administration of questionnaires because of the vastness of the area under study. The total number of 378 questionnaires were distributed, 40 copies distributed to the principals and all the 40 copies were retrieved, 326 were also distributed to the teachers but only 318 were retrieved while 8 copies was not retrieved, so also 12 copies were distributed to the supervisors and were all retrieved.

3.7 Method of Data Analysis

The researcher used both descriptive and inferential statistics for the data analysis. In analyzing the collected data, descriptive statistic of frequency count, percentages used to analyze the bio data of the respondents, weighted mean of 3.0 analyze responses of the respondents to the research questions. Inferential statistics of Analysis of Variance (ANOVA) was used to analyse the five hypotheses at 0.05 level of significance.Supporting the appropriateness of statistical tools to be used for this study, Ekeh (2003) stated that t-test is used for determining significant difference between two mean while ANOVA should be used for mean more than two. All hypotheses were tested at 0.05 level of significance.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1 Introduction

This study is on assessment of school mapping on allocation of school facilities in secondary schools in Kaduna State, Nigeria. A total of 370 respondents consisting of 40 principals, 318 teachers and 12 supervisorsadequately filled and returned the instruments which formed the basis for analysis as used in thestudy. The first section presented the bio-data of the respondents. The second section presented answers to the five research questions using arithmetic means opinions of respondents. The mean response on each set of items that answers each research questions was compared with established decision mean of 3.00 computed based on the five Likert Scale options per questions; (5+4+3+2+1)/5=3.00. The third section tested the correspondingnull hypotheses using the inferential statistics of Analysis of Variance (ANOVA), since the opinion was by three categories of respondents (i.e. principals, teachers and supervisors) in each hypothesis. All the hypotheses were tested at 0.05 levels of significance. Summary of major findings as well as discussions of findings were also included in this chapter.

4.2 Analysis of Personal Data of the Respondents

Table 4.1 presents the distribution of personal data of the respondents in frequency and percentages

Table 4.1: Bio-Data of Respondents

S/N	Bio-Data	Category	Frequency	%	Cumulative %
1	Status	Principals	40	10.8	10.8
		Teachers	318	85.9	95.9
		Supervisors	12	3.2	100
2	Gender	Male	220	59.1	59.1
		Female	150	40.8	100
3	Qualification	M.Ed.	55	14.8	14.8
		B.Ed.	110	29.6	44.4
		NCE	193	52.4	96.8
		Others	13	3.5	100

Table 4.1 shows that 40 principals, 318 teachers, 12 Supervisorsrepresenting10.8%, 85.9 %, and 3.2 % respectively took part in the study. A total of 220 respondents representing 59.1% were male while 150 representing40.8 % were females. On qualification, 55 had M.Ed., 110 had B.Ed., 193 had NCE and 13 had other qualifications; with respective percentages as14.8 %, 29.6 %, 52.4 and 3.5 %.

4.3 Response to Research Questions

Frequency counts, mean and standard deviation were used to analyze the data collected which was meant to provide answer to the stated research questions. The questions and the analysis were as follows:

Research Question One: To what extent does school mapping influence the allocation of new secondary schools in Kaduna State, Nigeria?

Table 4.2: Mean Scores of Respondents onInfluence of School Mapping on Allocation of New Secondary Schools in Kaduna State, Nigeria

S/N	Item statement	Respondents	SA	A	UD	D	SD	N	MEAN
1	Through School mapping areas that needs new secondary schools are identified	Principals	20	7	-	12	1	40	4.4
		Teachers	210	10	-	18	12	318	3.8
		Supervisor	-	2	-	6	4	12	3.4
2	More technical colleges are established through effective school mapping	Principals	20	6	-	11	3	40	4.3
		Teachers	200	20	-	35	65	318	3.8
		Supervisor	10	-	-		2	12	3.0
3	School mapping creates a balance in the establishment of new secondary schools	Principals	8	10	1	11	10	40	3.5
		Teachers	160	28	8	29	95	318	3.4
		Supervisor	-	8	-	4	-	12	3.2
4	Effective school mapping enables government to make rational decisions on allocation new schools	Principals	27	2	-	1	10	40	4.8
		Teachers	79	98	5	90	46	318	2.6
		Supervisor	5	1	-	1	5	12	3.3
5	Records of school mapping guide educational planers to	Principals	15	10	-	5	10	40	4.1
		Teachers	108	23	5	127	45	318	3.9
		Supervisor	2	1	-	4	4	12	3.1
6	School mapping influence the choice of school in a given	Principals	16	6	2	14	2	40	3.9
		Teachers	39	38	4	159	78	318	1.9
		Supervisor	2	1	-	5	4	12	4.3
7	School mapping closes the gap between rural and urban school location	Principals	16	7	4	3	10	40	4.0
		Teachers	50	28	7	135	100	318	2.1
		Supervisor	1	8	-	2	1	12	4.2
8	School mapping enables schools to be located in the most appropriate place	Principals	18	10	-	2	10	40	4.4
		Teachers	31	14	4	244	25	318	2.3
		Supervisor	1	1	-	2	8	12	3.8
9	More schools are established through school mapping	Principals	10	8	5	8	9	40	3.4
		Teachers	35	37	-	190	58	318	2.2
		Supervisor	2	2	-	2	6	12	3.2
10	Through school mapping rural communities enjoy access to school	Principals	13	10	-	9	8	40	3.0
		Teachers	88	96	15	113	58	318	3.5
		Supervisor	1	9	-	2	-	12	3.4

Table 4.2 shows the responses of respondents on influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria**.** Items1was on whether tthroughschool mapping areas that needs new secondary schools are identified. The result shows that principals had mean score of 4.4, teachers 3.8 and supervisors 3.4 which is above the decision mean, the item statement was therefore accepted by the respondent. Item 2 was on whether more technical colleges are established through effective school mapping. The result revealed the mean score of 4.3, 3.8 and 3.0 for principals, teachers and supervisor respectively, which implies acceptance.

Item 3 was on whether School mapping creates a balance in the establishment of new secondary schools.

The result revealed 3.5, 3.4 and 3.2, as the mean score for principals, teachers, and supervisors accordingly implying acceptance. Item 4 was on whethereffective school mapping enables government to make rational decisions on allocation new schools. The item statement was accepted by the respondents with the mean score 4.8, 2.6, 4.3 and 3.3, respectively. Item 5 was further accepted by the respondents with the mean score of 4.1 for principals, 3.9 for teachers, and 3.1 for supervisors. Item 6 had the mean score 3.9, 1.9, and4.3 for principals, teachers, and supervisor accordingly. Item 7 was also accepted by the respondents with the mean score of 4.0, 2.1 and 4.2. Item 8 revealed that principals had 4.4, teachers had 2.3and supervisors had 4.9 as their mean score. Item 9 had mean score of 3.4, 2.2, and 3.2 for principals, teachers, and supervisors. Item 10, principals had 3.0, teachers had 3.5 and supervisors 34.It was established that school mapping created a balance in the establishment of new secondary schools in Kaduna State.

Research Question Two: How does school mapping influence the allocation of Science Laboratories in secondary schools in Kaduna state?

Table 4.3: Mean Scores Respondents onInfluence of School Mapping on Allocation of Science Laboratories in Kaduna State, Nigeria

S/N	Item statement	Respondents	SA	A	UD	D	SD	N	MEAN
1	School mapping makes it easy to identify school without science laboratory	Principals	12	5	-	4	10	40	3.2
		Teachers	158	20	2	23	102	318	3.9
		Supervisor	-	4	2	2	4	12	3.3
2	School mapping aids the provision of science laboratory equipment	Principals	20	7	-	10	3	40	4.5
		Teachers	20	220	8	25	17	318	3.4
		Supervisor	2	1	-	-	9	12	3.3
3	Obsolete science laboratory facilities are quantified through school mapping	Principals	15	10	-	12	3	40	4.9
		Teachers	170	16	5	19	110	318	1.8
		Supervisor	2	8	-	2	-	12	3.0
4	School mapping guide the ministry of education official on areas of needs in term provision of Lab.	Principals	13	16	-	10	1	40	3.5
		Teachers	40	25	5	227	26	318	2.4
		Supervisor	6	2	-	2	2	12	3.5
5	School mapping provides information on the state of science laboratory in our schools	Principals	15	10	1	-	14	40	3.3
		Teachers	108	113	7	47	45	318	4.7
		Supervisor	9	1	2	-	-	12	4.2
6	Adequate laboratory facilities are provided to schools through school mapping.	Principals	16	10	-	12	2	40	4.7
		Teachers	154	42	5	23	78	318	3.6
		Supervisor	5	5	-	2	-	12	4.6
7	Adequate laboratory chemicals are provided to schools through school mapping.	Principals	10	15	1	0	14	40	3.4
		Teachers	127	128	7	35	23	318	4.2
		Supervisor	8	2	-	2	-	12	3.5
8	The state of maintenance of science laboratory is known through school mapping	Principals	8	12	1	10	9	40	3.3
		Teachers	81	164	6	44	25	318	3.9
		Supervisor	1	3	-	-	8	12	3.3
9	School reduces gap in the provision of science laboratory between rural and urban schools	Principals	25	-	-	5	-	40	3.5
		Teachers	17	32	5	170	78	318	2.1
		Supervisor	20	12	-	2	6	12	3.4
10	School mapping enables school administrator to review the states of science laboratory in their schools	Principals	12	16	-	2	10	40	4.0
		Teachers	93	96	5	118	58	318	3.0
		Supervisor	3	7	-	2	-	12	3.1

Table 4.3 shows the responses of respondents on influence of school mapping on allocation of Science Laboratories in Kaduna state, Nigeria. Items1 was on whether School mapping makes it easy to identify school without science laboratory. The result shows that principals had mean score of 3.2, teachers 3.9 and supervisors 3.3 which is above the decision mean, the item statement was therefore accepted by the respondent. Item 2 was on whether School mapping aids the provision of science laboratory equipment. The result revealed the mean score of 4.5, 3.4 and

3.3 for principals, teachers and supervisor respectively, which implies acceptance. Item 3 was on whether obsolete science laboratory facilities are quantified through school mapping. The result revealed 4.9, 1.8 and 3.0, as the mean score for principals, teachers, and supervisors accordingly implying acceptance. Item 4 was on whetherSchool mapping guide the ministry of education official on areas of needs in term provision of Lab.

The item statement was accepted by the respondents with the mean score 3.5, 2.4, and 3.5, respectively. Item 5 was further accepted by the respondents with the mean score of 3.3 for principals, 4.7 for teachers, and 4.2 for supervisors. Item 6 had the mean score 4.7, 3.6, and 4.6 for principals, teachers, and supervisor accordingly. Item 7 was also accepted by the respondents with the mean score of 3.4 and 3.5. Item 8 revealed that principals had 3.3, teachers had 3.9 and supervisors had 3.3 as their mean score. Item 9 had mean score of 3.5, 2.1, and 3.4 for principals, teachers, and supervisors Item 10 principals had 4.0, teachers had 3.0 and supervisors 3.1. It was established that school mapping has aided the provision of science laboratories in secondary schools in Kaduna State.

Research Question Three: In what way does school mapping influence the allocation of school libraries in secondary schools in Kaduna State?

Table 4.4: Mean Scores Respondents on Influence of School Mapping on Allocation of School Libraries in Kaduna State, Nigeria

S/N	Item statement	Respondents	SA	A	UD	D	SD	N	MEAN
1	School libraries are provided through school mapping	Principals	15	10	-	12	3	40	4.2
		Teachers	170	16	5	19	110	318	3.5
		Supervisor	2	8	-	2	-	12	3.3
2	School mapping aids the replacement of obsolete books in the library	Principals	13	16	-	10	1	40	4.5
		Teachers	40	25	5	227	26	318	3.2
		Supervisor	6	2	-	2	2	12	3.9
3	Through school mapping man power need of the school library is taken care off	Principals	15	10	-	12	3	40	2.8
		Teachers	19	6	5	160	123	318	1.8
		Supervisor	10	2	-	-	-	12	2.9
4	Through school mapping , the need for school library is identified	Principals	20	6	-	11	2	40	3.5
		Teachers	132	13	5	132	38	318	3.3
		Supervisor	1	-	-	2	9	12	2.4
5	Library facilities are adequately provided through school mapping	Principals	21	9		10	-	40	4.0
		Teachers	34	90	7	129	68	318	2.5
		Supervisor	7	3	-	2	-	12	4.2
6	School that don't have library facilities are identified through school mapping	Principals	16	9	-	103	2	40	4.1
		Teachers	154	42	5	23	96	318	3.7
		Supervisor	3	7	-	2	-	12	4.7
7	Students have more access to school library with the help of school mapping	Principals	10	16	-	12	2	40	3.4
		Teachers	120	135	7	35	23	318	4.1
		Supervisor	7	-	-	-	5	12	3.6
8	School mapping draws government attention to the state of existing school mapping	Principals	18	12	1	10	10	40	3.3
		Teachers	49	64	6	149	55	318	2.9
		Supervisor	1	5	-	-	8	12	3.4
9	School mapping closes the gap in the provision of school library in secondary schools	Principals	25	5	-	10	10	40	3.6
		Teachers	115	32	5	70	78	318	4.1
		Supervisor	2	1	-	9	-	12	2.4
10	School mapping guide educational planners on the distribution of school facilities	Principals	2	26	-	2	10	40	3.9
		Teachers	81	96	5	120	68	318	3.0
		Supervisor	2	4	-	1	5	12	3.0

Table 4.4 shows the responses of respondents on influence of school mapping on allocation of Science Laboratories in Kaduna State, Nigeria. Items1 was on whetherSchool libraries are provided through school mapping. The result shows that principals had mean score of 4.2, teachers 3.5 and supervisors 3.3 which is above the decision mean, the item statement was therefore accepted by the respondent. Item 2 was on whether School mapping aids the provision of science laboratory equipment. The result revealed the mean score of 4.5, 3.2 and 3.9 for principals, teachers and supervisor respectively, which implies acceptance. Item 3 was on whether through school mapping man power need of the school library is taken care off.The

result revealed 3.5, 3.2 and 2.4, as the mean score for principals, teachers, and supervisors accordingly implying acceptance. Item 4 was on whetherthrough school mapping, the need for school library is identified.

The item statement was accepted by the respondents with the mean score 3.5, 2.4, and 3.5, respectively. Item 5 was further accepted by the respondents with the mean score of 4.0 for principals, 2.5 for teachers, and 4.2 for supervisors. Item 6 had the mean score 4.1, 3.7, and 4.7 for principals, teachers, and supervisor accordingly. Item 7 was also accepted by the respondents with the mean score of 3.4, 4.1 and 3.6. Item 8 revealed that principals had 3.3, teachers had 2.9 and supervisors had 3.4 as their mean score. Item 9 had mean score of 3.6, 4.1, and 2.4 for principals, teachers, and supervisors Item 10 principals had 3.9 teachers had 3.0 and supervisors 3.0. It was established that school mapping has guided the official of ministry of education in establishing school libraries in areas where they are most needed in secondary schools in Kaduna state.

Research Question Four: Do school mapping influence the allocation of classrooms in secondary schools in Kaduna state?

Table 4.5: Mean Scores Respondents on Influence of School Mapping on Allocation ofClassrooms inSecondary Schools in Kaduna State, Nigeria

S/N	Item statement	Respondents	SA	A	UD	D	SD	N	MEAN
1	School mapping aids the provision of more classrooms in the school	Principals	20	7	-	10	3	40	4.5
		Teachers	20	220	-	23	57	318	3.6
		Supervisor	1	1	-	5	5	12	3.3
2	Through school mapping, school with inadequate classrooms are made known to the government	Principals	15	10	-	5	10	40	3.0
		Teachers	119	28	5	70	98	318	4.1
		Supervisor	1	4	-	6	1	12	3.3
3	School mapping provides information to voluntary donors on how and where to provide classrooms	Principals	15	10	-	12	3	40	3.9
		Teachers	170	16	5	19	110	318	3.3
		Supervisor	2	8	-	2	-	12	3.1
4	Through school mapping, school with inadequate classrooms are identified	Principals	13	16	-	10	1	40	3.4
		Teachers	40	25	5	227	26	318	4.1
		Supervisor	6	2	-	2	2	12	2.6
5	School mapping provide information on the existing classroom facilities	Principals	15	10	1	-	14	40	3.3
		Teachers	108	113	7	47	45	318	3.0
		Supervisor	9	1	2	-	-	12	3.4
6	School mapping provides useful information for planning of more classrooms	Principals	16	10	-	12	2	40	3.3
		Teachers	154	42	5	23	78	318	3.9
		Supervisor	5	5	-	2	-	12	3.4
7	School mapping aids the provision of teachers chairs and tables in the classrooms	Principals	10	15	1	0	14	40	3.7
		Teachers	127	128	7	35	23	318	4.2
		Supervisor	8	2	-	2	-	12	3.4
8	More students' desk are provided through school mapping.	Principals	8	12	1	10	9	40	3.9
		Teachers	81	164	6	44	25	318	3.1
		Supervisor	1	3	-	-	8	12	2.1
9	Classrooms are strategically located in the school compound	Principals	15	10	-	12	3	40	3.8
		Teachers	170	16	5	19	110	318	2.8
		Supervisor	2	8	-	2	-	12	3.1
10	Classrooms are located in area that is not swampy	Principals	13	16	-	10	1	40	3.6
		Teachers	40	25	5	227	26	318	4.1
		Supervisor	6	2	-	2	2	12	3.4

Table 4.5 revealed the responses of respondents on influence of school mapping on allocation of classrooms in secondary schools in Kaduna State. Item1 was on whether School mapping aids the provision of more classrooms in the school. The result shows that principals had mean score of 4.5, teachers 3.6 and supervisors 3.3 which is above the decision mean, the item statement was therefore accepted by the respondent. Item 2 was on whether through school mapping school with inadequate classrooms are made known to the government. The result revealed the mean score of 3.0, 4.1 and 3.3 for principals, teachers and supervisor respectively, which implies acceptance. Item 3 was on whether School mapping provides information to voluntary donors on

how and where to provide classrooms. The result revealed 3.9, 3.3 and 3.1, as the mean score for principals, teachers, and supervisors accordingly implying acceptance. Item 4 was on whether through school mapping, school with inadequate classrooms are identified.

The item statement was accepted by the respondents with the mean score 3.4, 4.1, and 2.6, respectively. Item 5 was further accepted by the respondents with the mean score of 3.3 for principals, 3.0 for teachers, and 3.4 for supervisors. Item 6 had the mean score 3.3, 3.9, and 3.4 for principals, teachers, and supervisor accordingly. Item 7 was also accepted by the respondents with the mean score of 3.7, 4.2 and 3.4. Item 8 revealed that principals had 3.9, teachers had 3.1 and supervisors had 2.1 as their mean score. Item 9 had mean score of 3.8, 2.8, and 3.1 for principals, teachers, and supervisors Item 10 principals had 3.6 teachers had 4.1 and supervisors 3.4. It was established that school mapping has greatly influenced the allocation of new blocks of classroom in secondary schools in Kaduna state.

Research Question Five: What is the influence of school mapping on the allocation of multi-purpose halls in secondary schools in Kaduna State?

Table 4.6: Mean Scores Respondents onInfluence of School Mapping on Allocation of Multi-PurposeHalls in Kaduna State, Nigeria

S/N	Item statement	Respondents	SA	A	UD	D	SD	N	MEAN
1	Multi-purpose halls are provided in all secondary schools	Principals	15	10	-	5	10	40	3.7
		Teachers	108	23	5	127	45	318	3.2
		Supervisor	2	1	-	4	4	12	3.4
2	Through school mapping , rural schools are provided with multi-purpose halls	Principals	16	6	2	14	2	40	4.1
		Teachers	39	38	4	159	78	318	3.7
		Supervisor	2	1	-	5	4	12	4.6
3	Most of the multi-purpose halls don't have the required facilities	Principals	16	7	4	3	10	40	3.4
		Teachers	50	28	7	135	100	318	4.1
		Supervisor	1	8	-	2	1	12	2.9
4	The school multi-purpose halls are used by the community	Principals	18	10	-	2	10	40	2.1
		Teachers	31	14	4	244	25	318	1.9
		Supervisor	1	1	-	2	8	12	2.9
5	Multi-purpose halls are strategically located in all the schools	Principals	10	8	5	8	9	40	2.2
		Teachers	35	37	-	190	58	318	2.3
		Supervisor	2	2	-	2	6	12	2.0
6	Multi-purposes halls are used for several purposes in the school	Principals	15	10	-	12	3	40	3.3
		Teachers	170	16	5	19	110	318	3.9
		Supervisor	2	8	-	2	-	12	3.4
7	Through school mapping, schools that most need hall are provided with.	Principals	13	16	-	10	1	40	3.8
		Teachers	40	25	5	227	26	318	4.1
		Supervisor	6	2	-	2	2	12	2.9
8	Multipurpose facilities are used for only academic activities during school hours	Principals	15	10	-	12	3	40	2.5
		Teachers	19	6	5	160	123	318	2.1
		Supervisor	10	2	-	-	-	12	2.7
9	Multi-purpose facilities build for only within school environment	Principals	20	6	-	11	2	40	3.9
		Teachers	132	13	5	132	38	318	3.5
		Supervisor	1	-	-	2	9	12	3.4
10	No single multi-purpose hall is located in the schools	Principals	21	9		10	-	40	4.1
		Teachers	34	90	7	129	68	318	3.1
		Supervisor	7	3	-	2	-	12	3.7

Table 4.6 revealed the responses of respondentson influence of school mapping on allocation of multi-purpose halls in secondary schools in Kaduna state. Item1 was on whether Multi-purpose halls are provided in all secondary schools. The result shows that principals had mean score of 3.7, teachers 3.2 and supervisors 3.4 which is above the decision mean; the item statement was therefore accepted by the respondent. Item 2 was on whether through school mapping, rural schools are provided with multi-purpose halls. The result revealed the mean score of 4.1, 3.7 and 4.6 for principals, teachers and supervisor respectively, which implies acceptance. Item 3 was on whether Most of the multi-purpose halls don't have the required facilities. The result revealed

3.4, 4.1 and 2.9, as the mean score for principals, teachers, and supervisors accordingly implying acceptance. Item 4 was on whether the school multi-purpose halls are used by the community.

The item statement was rejected by the respondents with the mean score 2.1, 1.9, and 2.9, respectively. Item 5 was further rejected by the respondents with the mean score of 2.2 for principals, 2.3 for teachers, and 2.0 for supervisors. Item 6 had the mean score 3.3, 3.9, and 3.4 for principals, teachers, and supervisor accordingly. Item 7 was also accepted by the respondents with the mean score of 3.8, 4.1 and 2.9. Item 8 revealed that principals had 2.5, teachers had 2.1 and supervisors had 2.7 as their mean score. Item 9 had mean score of 3.9, 3.5, and 3.4 for principals, teachers, and supervisors Item 10 principals had 4.1 teachers had 3.1 and supervisors 3.7. It was established that through school mapping, a lot of multi-purpose halls were built in secondary schools in Kaduna State.

4.4 Hypotheses Testing

The five null hypotheses formulated for this study were tested using Analysis of Variance (ANOVA) at 0.05Alpha level of significance.

Hypothesis One: There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria

Table 4.7: Summary ofOneWay Analysis of Variance (ANOVA) on Influence of School Mapping on Allocation of New Secondary Schools in Kaduna State, Nigeria

New School	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.865	2	2.288	2.409	0.067
Within Groups	355.360	368	.950		
Total	**362.225**	**370**			

Table 4.7 shows the f-ratio value of 2.409 at 2 df 368 and at 0.05 alpha level of significance. The probability level of significance P value (0.067) is less than 0.05. This means there is no significant difference in the opinions of respondent on the influence of school mapping on allocation of new secondary schools in Kaduna State, Nigeria. Therefore, the null hypothesis is retained.

Hypothesis Two: There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of science laboratory in secondary schools in Kaduna State, Nigeria.

Table 4.8: Summary of Analysis of Variance (ANOVA) Statistics on Influence of School Mapping on Allocation of Science Laboratory in Secondary Schools in Kaduna State, Nigeria

Science Laboratory	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.292	2	4.431	4.200	0.006
Within Groups	394.505	368	1.055		
Total	**407.797**	**370**			

Table 4.8 showed the F-ratio value of 4.200 at 2 df 368 and at 0.05 alpha level of significance. The probability level of significance P value (0.006) is less than 0.05. This means there is no significant difference in the opinions of respondent on the influence of school mapping on allocation of science laboratory in secondary schools in Kaduna State, Nigeria. Therefore, the null hypothesis was rejected.

Hypothesis Three: There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of school libraries in secondary schools in Kaduna state, Nigeria

Table 4.9: Summary of Analysis of Variance (ANOVA) Statistics on Influence of School Mapping on Allocation of School Libraries in Secondary Schools in Kaduna State, Nigeria

School Libraries	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.630	2	1.543	1.494	0.216
Within Groups	386.352	368	1.033		
Total	390.982	**370**			

Table 4.9 showed the F-ratio value of (1.494) at 2 df 368 and at 0.05 alpha level of significance. The, the probability level of significance (P value) 0.216 is greater than 0.05. This means there is no significant difference in the opinions of respondent on the influence of school mapping on allocation of school libraries in secondary schools in Kaduna state, Nigeria.Therefore, the null hypothesis was retained.

Hypothesis Four: There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria

Table 4.10: Summary of Analysis of Variance (ANOVA) Statistics onInfluence of School Mapping on Allocation of Classrooms in Secondary Schools in Kaduna State, Nigeria

Classrooms	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.511	2	1.837	1.711	0.164
Within Groups	401.511	368	1.074		
Total	**407.022**	**370**			

Table 4.10 showed the f-ratio value of 1.711 at 2 df 368 and at 0.05 alpha level of significance. The probability level of significance (P value) 0.164 is greater than 0.05. This means there is no

significant difference in the opinions of respondent on the influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria. Therefore, the null hypothesis was retained.

Hypothesis Five: There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of multi-purpose hall in secondary schools in Kaduna State, Nigeria

Table 4.11: Summary of Analysis of Variance (ANOVA) Statistics onInfluence of School Mapping on Allocation of Multi-Purpose Hall in Secondary Schools in Kaduna State, Nigeria

Multi-purpose hall	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	7.086	2	2.362	2.428	0.065
Within Groups	363.801	368	.973		
Total	**370.887**	**370**			

Table 4.11 showed the f-ratio value of 2.428 at 2 df 368 and at 0.05 alpha level of significance. The probability level of significance (P value) 0.065 is greater than 0.05. This means there is no significant difference in the opinions of respondent on the influence of school mapping on allocation of multi-purpose hall in secondary schools in Kaduna state, Nigeria.Therefore, the null hypothesis was retained

4.5Summary of Hypotheses Testing

This section presents the summary of all the null hypotheses tested in the course of the study.

Table 4.12: Summary of the Hypotheses Testing

N/S	H_0 Statement	Statistical Tool Used	Result	Level of Sig.	Remark
1.	There is no significant difference in the opinions of respondent (principals, teachers, supervisors on the influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria	Analysis of Variance (ANOVA)	F-calculated is 2.409, while the p value is 0.067 at 0.05 levels of significance.	0.05	**Ho_1** was retained. This means there is no significant difference in the opinions of respondents.
2.	There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of science laboratory in secondary schools in Kaduna state, Nigeria.	Analysis of Variance (ANOVA)	F-calculated is 4.200, while the p value is 0.006 at 0.05 levels of significance.	0.05	**Ho_2** was rejected. This means that there is significant difference in the opinions of respondents.
3.	There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of school libraries in secondary schools in Kaduna state, Nigeria	Analysis of Variance (ANOVA)	F-calculated is 1.494, while the p value is 0.216 at 0.05 levels of significance.	0.05	**Ho_3** was retained. This means there is no significant difference in the opinions of respondents.
4.	There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria	Analysis of Variance (ANOVA)	F-calculated is 1.711, while the p value is 0.164 at 0.05 levels of significance.	0.05	**Ho_4** was retained. This means there is no significant difference in the opinions of respondents.
5.	There is no significant difference in the opinions of respondent on the influence of school mapping on allocation of multi-purpose hall in secondary schools in Kaduna state, Nigeria	Analysis of Variance (ANOVA)	F-calculated is 2.428, while the p value is 0.065 at 0.05 levels of significance.	0.05	**Ho_5** was retained. This means that there is no significant difference in the opinions of respondents.

4.6 Summary of Major Findings

The study foundthat:

i. School mapping created a balance in the establishment of new secondary schools in Kaduna State;
ii. School mapping has aided the provision of science laboratories in secondary schools in Kaduna State;
iii. School mapping has guided the official of ministry of education in establishing schoolLibraries in areas where they are most needed in secondary schools in Kaduna State;
iv. School mapping has greatly influenced the allocation of new blocks of classroom in Secondary schools in Kaduna State;
v. Through school mapping, a lot of multi-purpose halls were built in secondary schools inKaduna State

4.7 Discussion of the Findings

The findings of the study indicated that School mapping created a balance in the establishment of new secondary schools in Kaduna State. In addition, it was established that through school mapping areas that needs new secondary schools are identified;more technical colleges are established through effective school mapping. It also shows that school mapping creates a balance in the establishment of new secondary schools. Effective school mapping is found to enables government to make rational decisions on allocation new schoolsand School mapping influence the choice of school in a given location

The findings of the study revealed that School mapping has aided the provision of science laboratories in secondary schools in Kaduna state. In addition, it was established that School

mapping makes it easy to identify school without science laboratory, School mapping aids the provision of science laboratory equipment. It also shows that Obsolete science laboratory facilities are quantified through school mapping, School mapping guide the ministry of education official on areas of needs in term provision of Lab., School mapping provides information on the state of science laboratory in our schools and Adequate laboratory facilities are provided to schools through school mapping.

The findings of the study revealed that School mapping has guided the official of ministry of education in establishing school Libraries in areas where they are most needed in secondary schools in Kaduna state. In addition, it was established that School libraries are provided through school mapping, School mapping aids the replacement of obsolete books in the library. It also shows that through school mapping man power need of the school library is taken care off, through school mapping, the need for school library is identified. Library facilities are adequately provided through school mapping and School that don't have library facilities are identified through school mapping

The findings of the study revealed that school mapping has greatly influenced the allocation of new blocks of classroom in secondary schools in Kaduna state. In addition, it was established that School libraries are provided through school mapping. School mapping aids the replacement of obsolete books in the library. It also shows that through school mapping man power need of the school library is taken care off, through school mapping, the need for school library is identified. Library facilities are adequately provided through school mapping and School that don't have library facilities are identified through school mapping

The findings of the study revealed that through school mapping, a lot of multi-purpose halls were built in secondary schools in Kaduna state. In addition, it was established that Multi-purpose halls are provided in all secondary schools. Through school mapping, rural schools are provided with multi-purpose halls. It also shows that Most of the multi-purpose halls don't have the required facilities, the school multi-purpose halls are used by the community, Multi-purpose halls are strategically located in all the schools and Multi-purposes halls are used for several purposes in the school.

A study conducted by John and Ogondiek (2018) was on School Mapping and Micro-Planning in Educational Development: The Tanzania Educational Management Perspectivesrevealed that the implementation process of school mapping and micro-planning did not involve the rationalization of existing facilities, the creation, shifting, closure or amalgamation of institutions. The council failed to optimally utilize teaching and non-teaching staff, buildings, equipment and furniture and did not provide on job training to employees. The council increased enrollment and attendance of students and decreased incidents of students dropping out. The council lacked effective stakeholders' participation, economic and funding uncertainties and increased teacher work-loads.

Obasi and Madu (2018) investigated school mapping and the universalization of basic education in Imo State revealed among others that the level of primary school mapping since the implementation of UBE programme was low because it was carried out only on sampled subzones. The low level of mapping was also found out byObasi and Madu (2015) onsecondary school mapping in Rivers State.Such acondition will obviously have negative effects. This was pointed out bytheNational Population Commission (2011) that insufficient schools to satisfy demand can lead to overcrowded classrooms.

However, the finding is completely different from what Ellah (2012) found out in his study. He found out that in Otukpo Local Government Area, children of public primary school have low radius per child meaning the pupils cover short distances to school, which indicated access of high level natureto school places. The scholar further made a point that for the massive expansion of education which the UBE programme is designed for to be achieved, the success relies on access of high level nature to school places.

The studyalso revealed some of the problems that militate against effective primary school mapping in Imo State. They are: poor funding, lack of technical facilities like Global Positioning System, lack of trained manpower to operate the equipment, non-involvement of educational planners, over politicization of the process, lack or poor policy framework/guidelines, lack of proper assessment from the Ministry of Education and difficult terrain (hilly, riverine, rural areas). The finding corroborated that ofSabir (2013) who in his study found out that lack of knowledge of the concerned officials to carry out the activity, the absence of the clear-cut policy direction on what, how and when this activity should be undertaken, and no available resources in terms of manpower, infrastructure, and facilities essential to conduct school mapping are some of the factors militating against school mapping in the study area.

In the same vein, Ochai and Olatunde (2015) in their study found out that there are several ways politics influence the location of public secondary schools. The influenceinclude: political godfather influencing the locationof schools, establishing school to promote in-genuine philosophy to stay in power,immortalization of national heroes using institutions of learning, and location of school based on political consideration. These factors inhibit the proper mapping and rationalization of educational facilities.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the general summary, conclusions and also makes recommendations based on the findings from the study.

5.2 Summary

This study was conducted on Assessment of School Mapping on Allocation of School Facilities in Secondary Schools in Kaduna State, Nigeria. Chapter one has introduction, statement of the problem, objectives of the study, research questions, research hypotheses, basic assumption, significant of the study and scope of the study.Chapter two is concerned with the review of related literature to the study. Relevant literatures were therefore reviewed under the following sub-headings;Conceptual Framework, Assessment, School Mapping, School facility, School library, Science laboratory, Classroom, Multi-Purpose Hall, Theoretical framework, influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of science laboratories insecondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of school library in secondaryschools in Kaduna state, Nigeria, influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria, influence of school mapping on allocation of multi-purpose hall in secondary schools in Kaduna state, Nigeria, Empirical Study.

Chapter three was concerned with research design, population of the study, sampling and sampling techniques, instrumentation, pilot study, and validity of the instrument, reliability of the instrument, methods of data collection and methods of data analysis. In addition, research questions were answered using frequency and weighted mean. While the postulated hypotheses were tested using statistical tool of one way analysis of variance (ANOVA). The major findings of the study were;School mapping created a balance in the establishment of new secondary schools in Kaduna State, School mapping has aided the provision of science laboratories in secondary schools in Kaduna state, School mapping has guided the official of ministry of education in establishing school Libraries in areas where they are most needed in secondary schools in Kaduna state, school mapping has greatly influenced the allocation of new blocks of classroom in secondary schools in Kaduna state and through school mapping, a lot of multi-purpose halls were built in secondary schools in Kaduna state.

5.3 Conclusions

School mapping, to a great extent, act as a bridge between the fixing of overall objectives and their translation into definite actions at the local level. It is bridge between the planning of education and its administration. It is a complex of operation that allows for the interaction between different levels of administration. School mapping does two basic things: (i) The rationalization of education resources (ii) Securing greater equality of educational opportunity.

However, from the findings of this study, it was concluded that school mapping is a crucial tool in the hands of government and ministry of education officials which serves as compass for providing useful information for planning and implementation of educational policy and programmes. Much could be achieved if school mapping is handled by experts with uncommon dedication, using the right resources and at appropriate time.

5.4 Recommendations

Based on the findings made by the study, the following recommendations are put forth:

1. The existing tempo of school mapping should be maintained and improve upon by the KadunaState Ministry of Education, Science and Technology in secondary schools in Kaduna State. This will continue to ensure that schools are distributed accordingto need specification.
2. There should be regular assessment of the status of the existing science laboratories in secondary schools in Kaduna State. This will help government to easily identify schools that need expansion, renovation, upgrading, refurnishing of science laboratory equipment.
3. Government of Kaduna State should give school mapping all the needed attention in terms of funding and personnel. This will help in ensuring that libraries are adequately provided in secondary schools in Kaduna state.
4. Intensive school mapping should be carried out to ascertain the extent of inadequacy of classrooms in secondary schools in Kaduna State. This will help in ensuring that more blocks of classroom are provided where they are most needed.
5. Most schools don't have standard multi-purpose Halls; school mapping should be used to ascertain those areas of need in secondary schools in Kaduna State.

5.5 Suggestions for Further Study

Further studies should be conducted in other States in north- west zone to give room for effective and accurate generalization.

i. Assessment of school mapping on allocationof school facilities in tertiary institutions in North-West zone;
ii. Assessment of school mapping on allocation of school facilities in secondary schools in KanoState, Nigeria;
iii. Assessment of school mapping on allocation of school personnel in secondary schools in KatsinaState, Nigeria.

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Questionnaire on Assessment of School Mapping on Allocation of School Facilities in Secondary Schools in Kaduna State, Nigeria

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

Dear Sir/Madam,

REQUEST LETTER

The researcher is a master degree student of the above-named University, conducting a research onAssessment of School Mapping on Allocation of School Facilities in Secondary Schools in Kaduna State, Nigeria

Your honest response to the questionnaire will add value to his research work. Please, be assured that the information you provide shall be used only for academic exercise alone, and shall be treated with utmost confidentiality.

Thank you.

Yours faithfully,

Muhammad Lawal Hudu

SECTION 'A': BIO DATA

Please tick ( ) or fill in the corresponding box honestly

1. **Gender: (a)** Male ( ) (b) Female ( )
2. **Status:** (a) Principal ( ) (b) Teacher ( ) (c) Supervisor ( )
3. **Academic Qualification: (a)** N C E ( ) (b) Diploma ( ) (c) Degree ( ) (d) Others ( )

Please, tick ( ) in the column that relates to your opinion.

Section B: Influence of school mapping on allocation of new secondary schools in Kaduna state, Nigeria

S/N	Item Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	Through School mapping select areas that needs new secondary schools are siting					
2	More technical colleges are established through effective school mapping programmes					
3	School mapping creates a balance in the establishment of new secondary schools					
4	Effective school mapping enables government to make rational decisions on allocation of new schools					
5	Records of school mapping guide educational planers in setting secondary schools location					
6	School mapping influence the choice of school in a given community both in rural and urban					
7	School mapping closes the gap between rural and urban school location					
8	School mapping enables schools to be located in the most appropriate place					
9	More schools are adequately established through school mapping					
10	Through school mapping communities enjoy access to schools					

SECTION C: Influence of school mapping on allocation of science laboratories in secondary schools in Kaduna state, Nigeria

S/N	Item Statement	Strongly Agree	Agree	undecided	Disagree	Strongly Disagree
11	School mapping makes it easier to identify school without science laboratory					
12	School mapping aids the provision of science laboratory equipment toschools					
13	Obsolete science laboratory facilities are quantified through school mapping					
14	School mapping guide the ministry of education official in provision of Laboratories to schools.					
15	School mapping provides information on the state of science laboratory in our schools					
16	Adequate laboratory facilities are provided to schools through school mapping.					
17	Adequate laboratory chemicals are provided to schools through school mapping.					

18	The state of maintenance of laboratory is known through school mapping					
19	School mapping reduces gap in the provision of science laboratory between rural and urban schools					
20	School mapping enables school administrator to review the states of laboratory in their schools					

SECTION D: Influence of school mapping on allocation of school library in secondary schools in Kaduna state, Nigeria

S/N	Item Statement	Strongly Agree	Agree	undecided	Disagree	Strongly Disagree
21	School libraries are provided through school mapping					
22	School mapping aids the replacement of obsolete books in the library					
23	Through school mapping man power needs of the school library is taken care of					
24	Through school mapping , the need for school library is identified					
25	Library facilities are adequately provided through school mapping					
26	Schools without library facilities are identified through school mapping					
27	Students have more access to school library with the help of school mapping					
28	School mapping draws government attention to the state of existing libraries in schools					
29	School mapping closes the gap between schools in rural and urban secondary schools					
30	School mapping guide educational planners on the provision of library facilities					

SECTION E:Influence of school mapping on allocation of classrooms in secondary schools in Kaduna state, Nigeria.

S/N	Item Statement	Strongly Agree	Agree	undecided	Disagree	Strongly Disagree
31	School mapping aids the provision of more classrooms in secondary schools					
32	School mapping, exercise showcase schools with inadequate classrooms to the Government					
33	School mapping provides information to voluntary donors on how and where to provide classrooms					
34	Through school mapping, school with inadequate classroom structure are known					
35	School mapping provide information on the existing classroom facilities					
36	School mapping provides useful information for planning of more classrooms					
37	School mapping aids the provision of teachers chairs and tables in the classrooms					
38	More students' desk are provided through school mapping.					

39	Classrooms are strategically located in the school compound through school mapping					
40	Through school mapping Classrooms are strategically located in schools					

SECTION F: Influence of school mapping on allocation of multi-purpose hall secondary schools in Kaduna state, Nigeria

S/N	Item Statement	Strongly Agree	Agree	undecided	Disagree	Strongly Disagree
41	Multi-purpose halls are provided in all secondary schools					
42	School mapping facilitated the provision of multipurpose halls both rural and urban areas					
43	School mapping provide the required facilities in multipurpose hall					
44	Through school mapping multi-purpose halls are provided in both rural and urban secondary schools					
45	Multi-purpose halls are strategically located in all the schools through school mapping					
46	School mapping provide multi-purpose halls which are used for several purposes in secondary schools					
47	The multipurpose halls provided through school mapping are also mostly used by the community					
48	Multipurpose halls are provided to schools that are mostly in need					
49	The multi-purpose halls provided through school mapping are used as examination halls					
50	Through school mapping multi-purpose halls provided are used for sporting activities					