# AVAILABILITY AND UTILIZATION OF RESOURCES IN UNIVERSAL BASIC EDUCATION (UBE) INSTITUTIONS IN THE NIGER- DELTA REGION OF NIGERIA

BY

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#### DECLARATION

I declare that this research work is original and has not been submitted in part or full for any degree of this or any other University,

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#### CERTIFICATION

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#### **DEDICATION**

This work is dedicated to the God of the Lord's Chosen Charismatic Revival Church and also to my son Egboro-Akeni Dominion and lovely wife Mrs. Egboro Gloria Oghogho.

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#### ABSTRACT

This study examined the Availability and Utilization of Resources in UBE institutions in the Niger- Delta Region of Nigeria, with particular interest on Human and Physical Resources and their distribution in the Region. The population of the study was all the 10,980 UBE institutions which consist of 8,543 primary schools and 2,437 junior secondary schools in the Nine (9) states that constitute the study area. The sample drawn for the study was 3,650 UBE institutions in four states out of the Nine (9) states that constitute the Niger- Delta Region through the stratified random sampling and multi-stage sampling techniques. A self-designed checklist on availability and utilization of resources in UBE institutions was used to collect data for the study. Eight research questions were raised and answered using Percentages and Bar-chart while seven hypotheses were formulated and tested using Chi-Square ( $X^2$ ) statistics at 0.05 level of significance. The Human resources was examined in terms of availability of teachers, their qualifications and years of experience while the utilization of teachers was determined by the average weekly periods allocation and the teacher-student ratio using the Full Time Equivalent Teachers -Students ratio (FTETSR). Physical resources were examined in terms of availability, adequacy and utilization. The Time Utilization Rate (TUR), Space Utilization Rate (SUR), and Global Utilization rate (GUR) were used to determine the utilization rate of Classrooms, Basic Science Laboratories facilities. The result of data analysis revealed that UBE institutions in the Niger- Delta Region of Nigeria have adequate qualified teachers to teach with 2401 (94.1%) out of a total of 2548 staff have the required teaching qualifications. The findings also revealed that teachers were over utilized in UBE institutions in the Niger- Delta Region of Nigeria with teacher – students/pupils ratio of 1:100 using the Full Time Equivalent Teachers -Students ratio (FTETSR). The research findings revealed that all the physical resources examined were available in most UBE institutions although they were in-adequate. There was optimal utilization of the Classrooms with 78% (GUR) and over utilization Basic Science Laboratories with (GUR) of 102%. From the hypotheses tested, six of them revealed that school location had significant effect on the distribution of available human and physical resources. There were also significant differences in the utilization of Basic Science Laboratories in the rural and urban UBE institutions. Only hypothesis 4 revealed a non-significant difference in the utilization of human resources in terms of average weekly periods allocated to teachers in rural and urban UBE institutions. Based on the findings, it is recommended that the Universal Basic Education Commission (UBEC) and State Universal Basic Education Board (SUBEB) in the various states should always make an equitable distribution of teachers to the rural and urban UBE institutions. An appraisal of the state of facilities in UBE institutions needs to be embarked upon by (UBEC) and (SUBEB); this will give first- hand information on the state of facilities in the UBE institutions and provide the basis for a long term planning for physical facilities.

# CHAPTER ONE INTRODUCTION

#### **Background to the Study**

Education is a foundation of an economic growth, societal development and a prime way of improving the wellbeing of individuals. It increases the productive capacity of societies and their political, economic and scientific institutions. As the economies worldwide are transformed by technological advancement and new production methods that depend on a well-trained and intellectually flexible labour force, education has even turn into significant, (World Bank, 1990).

Basic education refers to the total range of learning activities taking position in different settings (formal, non-formal and informal), that try to meet fundamental learning needs. According to the International Standard Classification of Education (ISCED), fundamental education comprises of primary education (first stage of fundamental education) and junior secondary education (second stage).

In countries (developing countries in particular), basic education often includes also preprimary education and adult literacy programmes. Basic education according to Federal Republic of Nigeria (FRN 2004): shall be of a 9 year duration, comprising 6 years of primary education and 3 years of junior secondary education.

Apart from being free and compulsory, it shall also consist of adult and non-formal education programmes at primary and junior secondary levels for adult and out-of-school youths. A basis for sustainable life- long learning. It provides reading, writing and numeracy skills. It comprises of a wide range of formal and non-formal learning and teaching activities and programmes planned to enable learners to obtain useful literacy, Federal Ministry of Education (FME 2000). In the Nigerian settings, basic education includes primary, junior secondary, nomadic education as well as adult literacy.

It is designed at preparing individuals with such knowledge, skills and manner that will enable them: i. Live purposeful and satisfying lives. ii. Add to the development of the society. iii. Develop utmost socioeconomic and cultural profits from the society. iv. Discharge their civic obligations completely (FGN, 2004:13) This means, that Basic education aims at developing the whole person emotionally, morally, physically, sensitively and aesthetically.

Universal Basic Education is considered as a precedence for developing countries and the focal point of the Education for All (EFA) movement led by United Nation

Educational Scientific and Cultural Organization (UNESCO). Nigeria, being a signatory to the 1990 Jomitien Declaration of "Education For All by the year 2000" as well as a member of the group of E-9 Nations committed to the total eradication of literacy, responded to a prominent global initiatives that have arisen in the context of social and economic reforms, necessitated by the rising global importance on technological development and advancements.

This new emphasis is the result of knowledge explosion and technological development - prominent features of today's environment in which we live. The global initiatives referred to above is the Education For All (EFA) goals. The EFA objectives are: 1. Increasing and improving widespread early childhood care and education particularly for the most helpless and underprivileged children. 2.

Ensuring that by 2015, all children, mainly girls, children in complicated conditions and those belonging to ethnic minorities gain access to free and compulsory primary education of excellent value. 3. Making sure that the leaning needs of all young people and adults are met through unbiased access to suitable learning and life skills programmes. 4.

Achieving a 50% development in all levels of adult literacy by 2015 particularly for women and unbiased access to basic and continuing education for all adults. 5. Eradicating gender inequalities in primary and secondary education by 2005 and achieving equal opportunity in education by 2015 with a focal point on making sure that girls gain full and equal access to achievement in basic education of excellent value. 6.

Improving all phase of the quality of education and ensuring excellence of all, so that recognized and quantifiable learning outcomes are achieved by all especially literacy, numeracy and essential life skills (Ebenebe, 2008:45). It is in response to these goals and initiative that Nigeria adopted the National Economic Empowerment and Development Strategy (NEEDS), as a reform measure in 2004 - with the following targets: i. Value re-orientation. ii. Job creation and employment generation. iii. Poverty reduction. iv.

People empowerment through education in order to achieve the first three targets (Ebenebe, 2008:45). NEEDS recognized that about half of Nigerians are children. They are the bridge to a prosperous future. Therefore their education must be given the priority it deserves. Thus, it became imperative that provision must be made, actions taken to offer basic education for every citizen of the country.

Statistics for 1996 has shown that only 14.1 million children are enrolled in primary schools, out of 20million children of school going age. The completion rate was 64%

while the pace of transition to junior secondary school was 43.5%. Today, the situation appears to be pretty the same because the EFA details estimated the nation's literacy rate at 52%.

The Report went further to state that there are significant shortfalls and inadequacies in Nigeria's institutional and personnel capacities for the delivery of Basic education for all her citizens. In the words of the EFA (2000) Report".....There are wide spread disparities both in excellence and access across the nation. Available infrastructural facilities, learning materials and qualified teachers are grossly inadequate". P.16 In order to tackle these challenges i.e. universalize right of entry to basic education, engender conducive, the Nigeria government enacted the UBE Act on the 26 May 2004. The Act mandates every State Government to provide free compulsory education for every child of primary and junior secondary school age and every parent to make sure that his child or ward attends and completes his Basic education. Failure to comply attracts penalty.

The UBE programme as detailed in the Act has three aspects namely: 1. Basic Education: This encompasses the nine (9) years of schooling (primary and junior secondary education) for all children. 2. Nomadic schooling for school age children of Pastoral Nomads and migrant fishermen. 3.

Literary and non-formal education for out-of school children, youth and illiterate adults. The first component of the (UBE) Programme is coordinated and managed by the Universal Basic Education Commission (UBEC) the second by the National Commission for Nomadic Education (NCNE) and the third by the National Mass Education Commission (NMEC).

Following the enactment of the Act, the Universal Basic Education Commission (UBEC) was established. The commission was charged with the responsibilities of sourcing and disbursing funds to State Universal Basic Education Boards (SUBEB) and Local Government Education Authorities (LGEA) for the purpose of funding and management of Basic Education.

UBEC was also empowered to supervise the activities of the SUBEB and LGEA, also monitor and evaluate the use of the funds. UBEC is therefore the house of basic education administration in Nigeria. The importance of resources availability and utilization (human and physical) to every educational programme (UBE inclusive) cannot be overemphasized.

In achieving her goals, there has to be careful use of available human and physical assets so as to obtain optimal results. All educational programmes require human and

physical assets for functional performance, delivery or effective production. Availability of educational resources (human and physical) is vital to the attainment of the UBE's vision and mission.

They are unique educational input necessary for the over-all development of skills acquisition and literacy of the students. The level to which the UBE Scheme attains her goals is directly proportional to the educational resources available. According to Agabi (2010), educational assets can be classified into four (4) namely human, material, physical and financial resources.

Human resources in education are the workforce in an organization - teaching staff and non- teaching staff such as bursar, librarian, laboratory attendants, clerks, messengers, mail runners, gatekeepers, gardeners and cooks as well as educational planners and administrators (Ebong, 1999). Material resources include textbooks, charts, maps, audiovisual and electronic teaching aids such as computer, internet, multimedia, radio, tape recorder, television and video tape recorder.

Other category of material assets consist of consumables in form of paper supplies and writing materials such as biro, eraser, pencil, exercise books, crayon, drawing books, chalks, notebooks, ruler, slate, etc. Physical resources are those materials that facilitate educational process in the school and they are very vital to the progress and development of our educational system.

Physical assets include school plant such as, lecture theatres, classrooms, auditoriums, typing pools, libraries, administrative block, laboratories, workshops, gymnasia, assembly halls, special rooms like staff quarters, students' hostels, lavatory, kitchen, cafeteria, etc. while financial resources are the financial inputs on hand for and spent on the educational system.

These include fund allocation to education in form of government grants, PTA levies, and donations from philanthropists and internally generated revenues (IGRs). Effectiveness in the utilization of the materials is dictated largely by the sufficiency of the facilities. The importance of these resources to educational institutions cannot be over emphasized as their availability of these classes of resources is needed to achieve excellence in the system. Utilization according to Ngurukwem (2005) is the proportion of the available time a system is operating.

In terms of educational assets (resources), it may perhaps refer to the degree to which available resources are lay to use as the level to which an educational institution attains her goals is also directly connected to the rate at which the available educational resources are well utilized. As with organizations, school priorities are dramatically revealed by the way its plants are utilized.

A well utilized plant relates to and is vital to a sound educational process which is a means of ensuring effort and effectiveness of the institution. That is why, school buildings, equipment, ground utility, school environmental safety, its utilization, and effective teaching / learning are closely interwoven and interdependent (Oke, 2004).

It therefore turn out to be imperative that the readiness and utilization of educational resources such as human and physical in UBE institutions are essential to successful realization of the UBE programme in Nigeria. A report of the African Regional Studies programme of the World Bank presents a sorry image of the conditions in African UBE institutions - Nigeria inclusive.

It points out that most schools in sub-Sahara Africa undergo very poor condition of learning and teaching in dilapidated or half-completed buildings, inadequate learning materials, insufficient desks, overcrowded classrooms, inadequately educated and poor motivated teachers and the utilization of recitation as the dominant means for learning (World Bank, 1997).

Writing on the deplorable state of public schools in Nigeria, Ogunmoyela (2004) lamented that school buildings of UBE institutions have no roof, windows and doors, some walls are cracked, instructional facilities are lacking while teachers are frustrated consequent upon lack of equipment/facilities to meet educational endeavors. Comparing schools in developing countries with what obtains in industrialized world, in terms of facilities, materials, utilization, and provision.

Akintayo (1997) suggest that education in developing countries like Nigeria takes place below condition that are very different from those in industrialized countries like Great Britain. He also stated that primary school pupils in western world are likely to go to school in modern well-equipped buildings and to have a curriculum that is planned in terms of scope and sequence.

It was also noticed that in Nigeria, the total enrolment as a percentage of overall school age population had been waning since 1983 from 93% in that year till date {Chinsman, 1998 cited in Adeyemi, 2007). Niger- Delta Region which is the case study for this research work might not be entirely absolved from this apparent situation and decline in enrolment.

In the Education Handbook of most Niger- Delta States, it was indicated that the states

strived to provide facilities and other instructional materials and equipment for use in UBE institutions. In spite of these efforts, Ajayi (2001) felt sincerely the concerned that as much as total of 278,854 classrooms (1999/2000 session) in our schools were dilapidated.

He also observed that the obvious shortage of this number had resulted in rigorous overcrowding with pupils (students) sitting on bare floor. This condition has been recognized by researchers to be of great influence on the concern of teacher in the teaching - learning process hence, its impact on teacher populations in schools today.)

Ejiogu (1980), NPEC/World Bank (1997), Abdul Kareem (2000) and Adeyemi (2007) in their different studies reports how Nigerian educational sector is continually loosing much of its personnel to other sectors (setting) of the economy due to the state of the facilities in system. Presently, the sorry state of education in the Niger- Delta Region of Nigeria needs special dedicated attention (especially in the area of human and physical resources provision) so as to get the preferred positive changes being expected by the introduction of the UBE scheme.

Where positive changes are expected is in the area of pupils' enrolment, teacher population, facilities adequacy and the subsequent teacher pupil ratio among other so as to facilitate the school system function at optional level through the optimal use of facilities. It therefore becomes imperative that availability and utilization of educational assets such as human and physical in UBE institutions be explored as they are regarded as prerequisite for promotion of organized, purposeful and better planned education.

#### **Statement of the Problem**

Basic education has the objective of catering for the desires of children in the school system. These needs could be said to cover social, physical, moral, emotional, intellectual, spiritual and aesthetic growth and development. It is hoped that the acquisition of these laudable attributes at Basic education level would enable such children to live useful and happy life and to be worthy member of the Nigerian society.

The Federal Government of Nigeria viewed the UBE institutions as an initial instrument for the creation of National Solidarity but the means or process of achieving the above objectives is questionable. This can be observed from public outcry on opinion page of the vanguard Thursday October 5, 2006 page 34. Many criticized the state of UBE institutions in the Niger-Delta Region of Nigeria.

Common criticism levied against the UBE institutions are poor funding, staffing and infrastructural facilities. The report of the African Regional Studies programme of the

World Bank presents a sorry image of the conditions in African UBE institutions - Nigeria inclusive. It points out that most schools in sub-Sahara Africa suffer from very pitiable situation of learning in dilapidated or half-completed buildings, overcrowded classrooms, inadequate desks, overcrowded classrooms, insufficient learning materials, poorly educated and poor motivated teachers and the use of recitation as the dominant medium for learning and teaching (World Bank, 1997).

Also there is inadequate supply of teachers in some schools despite the fact that there is oversupply in other schools. The laboratories and workshops in the schools can as well be best imagined. There are no tools, equipment and apparatus in them while the libraries are either empty or contain irrelevant and outdated books.

This general decay has afflicted the UBE institutions, the rot is such that today, the UBE institutions are shadows of their past in terms of infrastructural facilities and academic performance. The schools were over populated and the facilities are over stretched. Onipede (2003) exclaimed that all our equipment are obsolete and school structures are in dilapidated condition.

Instructional materials are also lacking and these teaching aids are way of making teaching / learning process simple, more important and understandable .This situation which Ijaiya and Jekayinfa (2009) described as calamitous is a major concern to scholars and researchers in education. Cursory look at the problem confronting the availability and utilization of physical and human resources in UBE institutions has made it imperative to examine the extent to which the quantity and quality of available human and physical assets are provided in UBE institutions.

Hence the problem of the study is to find out whether the Universal Basic Education Commission (UBEC) is meeting the demand of UBE institutions in terms of human and physical resources adequacy, and when they are available whether are well utilized by the institutions.

# **Research Questions**

The following research questions guided this study:

- 1. What is the state of human resources availability in UBE institutions in the Niger-Delta Region of Nigeria?
- 2. What is the distribution pattern of teachers by qualification in UBE institutions in the Niger- Delta Region of Nigeria?
- 3. What is the position of teachers' years of experience in UBE institutions in the Niger- Delta Region of Nigeria?

- 4. What is the average weekly periods allocated to teachers in UBE institutions in the Niger- Delta Region of Nigeria?
- 5. What are the full time equivalent teachers students' ratio (FTETSR) in UBE institutions in the Niger- Delta Region of Nigeria?
- 6. What are the categories of physical resources available in UBE institutions in the Niger- Delta Region of Nigeria?
- 7. Are the available physical resources adequate in UBE institutions in the Niger-Delta Region of Nigeria?
- 8. What is the utilization rate of the physical resources in UBE institutions in the Niger- Delta Region of Nigeria?

# Hypotheses

- 1. There is no significant difference between the state of human resources (teachers) availability in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.
- 2. There is no significant difference between the distribution pattern of teachers by qualifications in UBE institutions in the Niger-Delta Region of Nigeria.
- 3. There is no significant difference between teachers' years of experience in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.
- 4. There is no significant difference between the average weekly periods allocated to teachers in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.
- 5. There is no significant difference between the teacher- students' ratio in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.
- 6. There is no significant difference between the availability of physical resources in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.
- 7. There is no significant difference between the utilization of physical resources in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

# **Purpose of the Study**

The main purpose of this study was to examine the availability and utilization of human and physical resources in UBE institutions in the Niger- Delta Region of Nigeria. Specifically, the study examined:

- 1. The state of human resources available in UBE institutions.
- 2. The distribution pattern of teachers by qualifications in UBE institutions.
- 3. The position of teachers' years of experience in UBE institutions.
- 4. The Utilization level of the UBE school teachers in terms of average weekly periods allocation and the full time equivalent teacher students' ratio (FTETSR)
- 5. The categories of physical resources available in UBE institutions.
- 6. Whether there was adequate supply of physical resources to the UBE institutions.
- 7. The extent to which physical resources were being utilized in UBE institutions.

- 8. Find out if school location significantly influences the state of human resources availability (teachers) in UBE institutions.
- 9. Find out if school location significantly influences the distribution pattern of teachers by qualifications in UBE institutions.
- 10. Find out if school location significantly influences teachers' years of experience in UBE institutions.
- 11. Find out if school location significantly influences the average weekly periods allocated to teachers in UBE institutions.
- 12. Find out if school location significantly influences the teacher- students' ratio in UBE institutions.
- 13. Find out if school location significantly influences the availability of physical resources in UBE institutions.
- 14. Find out if school location significantly influences the utilization of physical resources in UBE institutions.

### Significance of the Study

The findings of the study would be beneficial to school administrators, policy makers, educational planners, UBE authorities/Board and researchers in a number of ways as follows; the findings would be beneficial to the government, policy makers and educational planners by providing them with the information about the level of human and physical resources availability, utilization and distribution in UBE institutions in the Niger- Delta Region. This information can aid them in decisions making and policy implementation. The study will help to expose information that are of value to UBE authorities in identifying the areas that need resources in UBE institutions in the Niger-Delta Region. This study would enable the Government and Federal Ministry of Education to be informed about the state of resources in UBE institutions in order to equitably distribute the resources between urban and rural schools in the Niger-Delta Region. The findings of this study would serve as a guide to educational planners and policy makers by providing data that will drive school resources planning and constructions for years to come. The study would also be of benefit to relevant agencies charged with UBE schools supervision to be abreast with the trend in utilization of the available school resources in the Niger-Delta Region. Above all, it will provide opportunities for researchers in the Niger- Delta Region and in any other Region of the country for more research in this area and would help expand knowledge and serve as veritable resources tool in the future.

# Scope and Delimitation of the Study

This study was restricted to UBE institutions in the Nine (9) Niger- Delta states (Delta, Edo, Ondo, Bayelsa, Rivers, Cross-Rivers, Akwa-Ibom, Abia, and Imo) that constitute the Niger-Delta Region of Nigeria during the 2014/2015 academic year. The study was delimited to the following variables: Availability and utilization of resources (human and physical) in UBE institutions in the Niger- Delta Region. The content of

human resources covers distribution of teachers by qualifications, years of experience and utilization in terms of periods allotted to teaching and teacher-students ratio. While physical resources include categories of physical resources, adequacy and utilization of the resources.

### **Operational Definition of Terms**

The following terms were defined as used in this study:

**Adequacy of School Resources:** Refer to the extent to which the available physical and human resources meet the qualitative and quantitative requirement of the UBE programme.

**Availability of School Resources:** Refer to the physical and human resources that are on ground for the UBE programme.

**Distribution of Teachers:** Systematic way UBE teachers are deployed in schools after their recruitment.

**Human Resources:** This refers to the UBE teachers needed or required to facilitate teaching and learning in UBE schools.

**Physical Resources:** These are buildings, equipment, materials available or required to facilitate teaching and learning in UBE schools,

**Teachers' years of Experience:** The true position of teachers working years in the course of discharging his or her duties in the UBE schools.

**Universal Basic Education (UBE):** A 9 years education programme meant for pupils at the primary and students of junior secondary school levels.

**Utilization of Teachers:** The process of putting a UBE teacher to an effective use. It is measured in terms of teacher-students/pupils ratio.

**Utilization Rate:** The value obtained in the use of physical and human resources compared to the standard as specified by regulatory body.

### CHAPTER TWO RELATED LITERATURE REVIEW

#### **Theoretical Framework**

The theoretical framework used for this study was hinged on the 'System Resource Theory of Organizational Effectiveness' propounded by Ephraim Yuchtman and Stanley Seashore in (1967); The theory states that effectiveness is "an organization's potential to secure a profitable bargaining position in its setting and take advantage of that position to acquire, with caution distribute and supervise utilization of scarce and valued resources".

Sequel to this, an organization is resourceful when it is competent to satisfactorily acquire, judiciously distribute, well utilize and on a regular basis maintain scarce resources in implementing its programs. In turn, such an organization is probable to be effective in accomplishing its objectives. System resource procedure / approach to effectiveness views organization as an open system whereby the organization acquires inputs, engages in transformation processes and generate output.

The organization's survival is dependent upon having good relations with its constituencies based on the fact that they have the power to destruct the operation of the organization. For the organization to survive, it is required that it obtain a stable flow of resources from its setting as they are consumed. Failure to acquire these resources may result in the institution / organization tending toward a state of entropy.

This theory is relevant to UBE schools as an educational organization. The schools are not closed social systems, so depend on environmental support for their survival. However, resource provision to schools is exposed to state and community political affairs base on the various social programmes competing for inadequate resources. In this context, it takes a capable manager to secure a high-quality negotiating position and gain more resources from the environment for his or her school.

The rational allocation and use of acquired resources not only assures short term success but also helps to build up the manager's bargaining position for more resources (feedback effect). Thus, the creativity and abilities of the administrator or manager can be a most important determining reason in the accomplishment of an organization. This conceptualization is schematically represented in Figure 1



Figure 1: Showing Theoretical Framework.



As can be seen in Figure 1, the school is a social system; it has continuous interaction with its environment through input, processes and output.

One of the principal managerial responsibilities is to take advantage of the various opportunities available to secure the resources needed to execute educational programmes. The proper distribution, efficient utilization and adequate maintenance of the assets will determine the extent and value of school goal achievement. The productivity of the school setting generates feedback into its environment, which ultimately affects the manager's power to secure additional resources.

Where output is considered inadequate to justify the initial input of critical resources, securing additional input to maintain schools production and management process becomes difficult. The basic processes or inputs required by the school to sustain itself

within the system are the work process (teaching and learning), the management process, the evaluation process, and the internal feedback process (from the student).

These processes must be properly handled to guarantee that the school can be judged as resourceful. As shown in Figure 1, Ministry of Education, School Boards, Households, the Industrial and Commercial sectors, School community via the PTA, and all benefactor agencies (local or international) are the elements of the environment from which critical input must be secured to maintain the school.

In UBE Schools, the Universal Basic Education Commission (UBEC), the PTA and other agencies are responsible for the provision of resources to the school organization. It is the responsibility of UBEC to properly provide the resources for optimal gain. When adequate resources are supplied to the school and are optimally and effectively utilized, educational activities will be eased and quality output in form of enhanced academic performance will be achieved. The quality output will make the donor agencies to contribute more resources to the school setting.

#### The Evolution of Universal Basic Education in Nigeria

In 1955 the idea of universalization of Basic education began in the then Western Region of Nigeria under the Premiership of Chief Obafemi Awolowo who introduced the free, universal and compulsory education, popularly referred as Universal Primary Education (UPE). With the introduction of the UPE, there was an educational upheaval, not only in the west, but in Nigeria as at large.

In 1954 there were about 457,000 pupils attending fee-paying schools but by January, 1955, the figure increased to 811,000 representing over 56% increase in the enrollment. The number of primary school teachers increased from 17,000 in 1954 to 27,000 in 1955. This was achievable based on the fact that the government had gone out to train teachers to meet the prerequisite of the programme.

The government of the Western Region had to increase the budget from £2.2 million in 1954 to £5.4 million in 1955 (Fafunwa, 1974; Oni, 2006). Actually, 90% of the budget on education was spent on primary education alone. By 1957/58 the recurrent expenditure on education from the funds of the region was £7,884, 110, which covered personnel payment, other charges, special expenditure and grants-in-aids (Taiwo, 1980).

The feat achieved by the Western Region in terms of the UPE led the Eastern Region to embark upon its own 8 years free education scheme. Thus in February, 1957 the universal primary education scheme was launched in the Eastern Region using the firebrigade approach. The government started the programme without satisfactory planning; thus the needed finances for thorough execution were grossly insufficient.

Summarily put by Oni (2008) almost everything apart from the pupils was absent. Unfortunately, due to pressure and lack of time for proper groundwork, the schools were staffed by inexperienced teachers, therefore of low quality. The programme was unsuccessful in just one (1) year of its execution (Oni, 2008).

The free and universal education programme was not restricted to the eastern and western regions of the country. The Lagos Colony, a Federal Territory also floated its own scheme in 1957. At its inauguration, there were (96) primary schools with (50,182) pupils. These pupils had (1,646) teachers (Fafunwa, 1991).

The Northern Region had been acquainted to the Islamic form of education ever before the Christianity (Western) education came into the country. Islamic education came into Nigeria by over 300 years before the advent of Christian education around the 1840s (Oghuvbu, 2007). Hence, the region did not disturb itself to get on providing the Western education for its citizens.

It seemed to be comfortable with the Islamic education, so they opted out of the race for the provision of free universal primary education (Oni, 2008). So, the Northern region education was some however, delayed based on the fact that the curriculum of education revolved round reading the New Testament, the catechism and the commandments in Yoruba. Classes were held in churches and teachers' salaries were paid from church funds.

Then, Muslim parents did not completely sanction such western education based on the fact that it was a Christian education in a Christian setting. Their panic was that their children would be converted to Christianity through such education. Since, independence additional Education Laws, policies and edicts (laws) have been put in place, relying on the type of government being practiced in the country.

In 1979, the Constitution puts education on the contemporary list, which shows that the obligation and authority in education would be shared among the three tiers of government i.e., Federal, State and Local Governments. Between 1983 and 1999, a military era, decrees such as Decree No 16 of 1985, Decree 26 of 1988 and Decree 36 of 1990 were promulgated in Nigeria to guide and regulate the conduct of education in the country. A foremost policy made by the Federal Government was put in place in 1977; this was tagged the National Policy on Education.

This policy was the outcome of a seminar convened in 1973 after the National

Curriculum Conference. The 1977 policy has been revised thrice i.e., 1981, 1998 and 2004 (Ajayi, 2005). Since independence therefore, the general guiding principles of education in Nigeria is the equipping or furnishing of every citizen with such Knowledge, skills, attitudes and values which will give him the opportunity to derive maximum benefits from his membership of the society.

The common purpose behind their respective educational programme was chiefly to increase primary education access to profit children of school age. While the UPE programme in the west was characterized by story of success, the same cannot be said of UPE programme in the eastern region as it was symbolized by a short time of planning resulting into numerous problems.

As can be shown from the abovementioned, the universalization of primary education in Nigeria originally was a regional / provincial project or scheme. That is, each region including the northern region tried to develop its own programme of promoting education among its citizens. The course of making universalization of primary education a national project started with the Obasanjo's regime in 1976 during the military rule.

For the first time in the history of Nigeria, the UPE programme that originally started as regional scheme/project was redeveloped by the national government to provide education for the Nigerian citizens by changing the content of UPE (Eddy and Akpan, 2009) to encircle the following philosophy of education as articulated in National Policy on Education.

This philosophy emphasizes; the improvement of the person into a complete and effective citizen; the full assimilation of the individual into the society and the provision of impartial access to educational opportunities for all citizens at all levels of education within and outside the formal school setting. Since 1977, therefore the Federal Government of Nigeria through the National Policy on Education requires that every child has a right to unbiased educational opportunities, regardless of any real or predictable disabilities.

According to this policy, education is believed to unbiased opportunities to enable any individual, in spite of background, can attain success. The schools are required to make available professional training and readiness for later certified specialization. The schools are also expected to introduce them to activities not associated to work appreciation of arts, the development of interest and hobbies, the fondness and skills to be involved in recreational activities and the like, in real sense, the primary objective of education is human resources development, which is aimed at national growth and development. This is why the country made its policy on education to circle round the philosophy and goals and objectives of the country.

The philosophy of education, as derived from the national objective, are the development of the person into an able and effective citizens; the full assimilation of the person into the general public, the society at large and the provision of equal right of entry to educational opportunities for all citizens at all echelon of education within and outside the formal school setting.

### The Universal Basic Education: Its Nature, Objectives and Features in Nigeria.

The idea of the universal basic education probably not be a new scheme totally. From all indications, the Universal Education can be considered as a subsidiary of the Universal Primary Education (UPE) scheme, which was launched in the country in 1976. As usual with Nigeria, this scheme was neglected mid-way (Aluede, 2006). The fact that the scheme i.e.,

UPE had something to offer maybe led to the re-introduction of the programme in another name and concept known as Universal Basic Education in 1999. The Universal Basic Education (UBE) is a policy reform measure of the Federal Government of Nigeria, aimed at rectifying alterations in the basic education. UBE is conceived to welcome formal education up to age 15, as well as adult and non-formal education, including education of the marginalized groups within the Nigerian society.

The National Policy on Education, 2004 section 3 defined Basic Education as a type of education comprising 6 years of primary education and 3 years of junior secondary school. The policy requires that the education shall be free and compulsory. This scheme shall include adult and non-formal educational programmes at primary and junior secondary school echelon for both adults and school dropout.

The UBE has three (3) major components universal, basic and education. Universal here means the programme is for everyone in spite of tribe, culture or race and class (Aluede, 2006; Eddy and Akpan, 2009). The term basic represent that which is a fundamental or essential thing that must be given or had. It is on this feature that every other thing rests on.

Without it, nothing may be achieved. It is the source for gaining of any knowledge (Eddy and Akpan, 2009). Hence, URB can be viewed as that kind of education that every individual must have. Not to be a privilege but a right and it should be the total of an individual's experience.

The Universal Basic Education's objective is to serve as a major boost of national development in support of the realization of the nation's UBE's vision, working in concert with all stakeholders. This will mobilize the nation's creative energies to make sure that Education for all becomes the responsibilities of all (UBEC, 2005 Annual Report).

The Universal Basic Education Commission in its annual report in 2005 listed the goals and objectives of the Universal Basic Education to consist of ensuring unfettered access to 9 years of formal basic education; the provision of free, universal basic education for every Nigerian child of school-going age; decreasing drastically the rate of drop-out from the formal school setting, through improved relevance, excellence and efficiency and making sure that the attainment of suitable levels of literacy, numeracy, manipulative, communicative and life skills, as well as the ethical, moral and civic values desired for laying a solid foundation for life-long learning.

To realize the above mentioned goals, objectives and indeed the UBE's vision and mission of the Scheme, an Act tagged UBE Act was enacted on the 26 May, 2004. It was titled "Act to provide for compulsory, free, universal Basic Education and other related matters". Following the enactment of the Act, the Universal Basic Education Commission (UBEC) was established.

The Act provides three sources of funding for the implementation of the UBE, which are Federal Government Grant of not < 2% of its consolidated revenue fund; funds or contributions in the form of Federal Guaranteed Credits and local or international donor grants. Although, this Act covers both the State and the Local Governments, the State Government can only profit from the Federal Government block grant meant for the implementation of the UBE if it can contribute at least 50% of the total cost of the project. This is to make sure the state's commitment towards the project.

To make certain that the UBE project enjoys a broad coverage, the Act provides sanctions for parents who fall short to send their children and wards to school. Also, in order to make sure that poverty is not an impediment to education, the project provides free textbooks in core subjects as well as eradicates tuition at the primary school and at the junior secondary school levels.

The acting out of the UBE Act has a legal implication, which makes it compulsory for provision of universal, free and compulsory 6 years of primary education and the first 3 years of secondary education. The various goals and objectives of the UBE stated above, the child should have a continuous, uninterrupted stretch of education for 9 years from primary school to the 3rd year of the junior secondary school.

Apart from this, the UBE scheme plans catering for the adults who have been school drop out before they obtained the basic skills required for life-long learning in form of non-formal programmes. So, the UBE programme is planned in such a way that it shall provide non-formal skills and training, for youths who have not had the profit of formal education (Dare, M.E, Vail, S.C and Fuller, B. (2008). The new scheme has therefore changed the education system from (6, 3, 3, 4) to (9, 3, 4).

It is estimated that there shall be a smooth changeover from the primary school (6 years) to the junior secondary school (3 years). This also turns to no entrance examination into the junior secondary school. It is also expected that junior secondary schools shall be an independent body, not having much to do with the senior secondary school.

In order to achieve this, all states of the federation have given the junior schools their autonomy. Thus, the junior secondary schools operate as separate bodies, having their own principals, vice-principals and members of teaching and non- teaching staff. From the abovementioned, it can be seen that the UBE programme in Nigeria has its own exceptional features.

First, the scheme makes it required for every government in Nigeria to provide free, compulsory and universal basic education for every child of primary and junior secondary school age. Secondly, it obligates all parents to make sure that their children or wards attend and complete their primary education and junior secondary school as stated in Section 2 of the Act, which provides some fines for any breach of the Act.

# **Concept and Types of Educational Resources**

Resources are the basic tools necessary in the effective performance of task and for the increase and development of human organization. According to Agabi (2010) the word "resource" developed out of the Latin phrase "re-surgere" literarily interpreted as: again (re) to rise (surgere) or "to rise again" "Re surgere" developed into the French word "resource" meaning "relief or recovery which in turn developed into the English word, "resource" defined as something that can be used to an advantage.

Hornby (2000) defined resources as something that a nation, an organization or a person has; that can utilize, especially to boost wealth; a. something that provides help, support or comfort when needed. Longman (2006:208) provided a more comprehensive and detailed method to the word by defining it to include:

- a. Useful land or minerals such as coal, or oil that exists in a country or nation and can be utilized to increase its wealth.
- b. All the money, property, skills that are available and can be utilized when needed.

c. Personal traits such as courage and determination, that are necessary in dealing with a difficult situation, and books, films, pictures used by teachers and students to provide information.

Resources are the basic tools necessary in the effective performance of tasks and for the expansion and development of human organizations. The constitution of a resource is determined by the uses to which it can be put. Generally, a resource is identified by its skills to solve problems, and yield more wealth when applied to economic situation. Resources are classified as visible when they exist and can be quantified in the form of human beings, land, money, property, books, and pictures.

Resources are invisible when they exist in the form of skills and physical dexterity and can only be considered in terms of productivity levels and quality of work. It is difficult to decide who has what skill and level of physical dexterity if tasks are not assigned to human beings. The person who possesses the skills and the physical dexterity constitute the class of resources known as human resources.

The other types of visible resources that can be applied by human resources in the production process constitute material resources. Agabi, (2010) separates human capital from other human and physical assets, by describing it as: The present discounted importance of the additional productivity, over and above the product of inexperienced labour, of people with skills and qualifications.

Human capital may be acquired through unequivocal training or on-the-job experience. Like physical assets, it is liable to obsolescence through changes in technology or tastes. Unlike physical assets, it cannot be used as collateral for loans" Human capital is therefore consciously created through education and training.

While accepting the universal economic definition of land as the reason of production supplied by nature, Agabi (2010) believed that the quality of land can be enhanced by the application of human expertise. Thus, a farmer is able to produce better land by applying labour to extract weeds or fertilizer to get better soil balance. Similarly, in the area (field) of education, professionals are required in the effective manipulation of educated labour.

Goal and objective realization in any school depends on sufficient supply and effective utilization of appropriate and efficient human and relevant material resources that would enhance proper educational process within a favorable environment. When all these are hard to come by, then teaching will not be efficient and learning atmosphere will not be conducive for students.

When educational assets (resources) are available, learning becomes more significant and through them, information that is subsidiary to the method of teaching is communicated permanently to the students and facts are preserved better when supplemented with educational assets (resources). The word 'Resources' mean materials resources, tools, equipment, infrastructures, physical plants and human labour.

It can be said therefore that the management of organizations utilize both human / material resources available to realize the set objectives and goals of the organization. Formal education system is one of such numerous organizations world wide that render or offer services to humanity. Therefore, there is need for one type of resources or another for the individual to acquire the needed knowledge and skills for future survival.

Formal organizations are made up of people. They are set up in order to realize certain objectives and goals. The realization of these goals relies on the right kind, quality, quantity and mix. It also relies on the proper use of these resources. Tijani (2011) described educational resources as the total of the inputs that go into the educational system.

He stressed further that these assets (resources) are all the things that are utilized directly otherwise indirectly for the influencing, transmission of knowledge, skills, competence and know-how. The discipline of school business administration concerns the utilization of available assets (resources) which are inadequate in relation to the need to realize the goals and objectives of the education system. Resource utilization is the major emphasis in school management.

The main problem facing the school administration is how to utilize the "available funds, assets, manpower, equipment, building and materials for effective impact on the students. The resources are so significant that no school system can give qualitative learning without them. Since these resources (assets) are scarce, their utilization in the production procedure requires skill and training. The utilization of the resources demands careful planning supervision, co-ordination and control.

#### **Types of Educational Resources**

That which constitutes a resource in education is determined by the level of education and the type of education to be provided. The standard resources for all educational types and levels are approved by the Federal Government.

The resources essential for the provision of primary and secondary education in Nigeria are prescribed by the National Policy on Education (FRN, 2004:87). Educational

resources have been categorized into four groups according to Agabi (2010):

- 1. Physical resources such as; school plants, classrooms, administrative buildings, recreational equipments and the whole school ground.
- 2. Material resources including; instructional materials, stationeries, educational plans, objectives and approved methodologies.
- 3. Human resources (both teaching (academic) and non-teaching (non-academic) staff).
- 4. Financial resources made up of all monetary input into the education system directed towards the realization of specified educational objectives.

# **Resource Provision**

Educational resources are provided and supplied by the proprietor of the educational institution. Adeogun (2003:35) there are factors that must be considered before providing resources in education. They are:

- 1. Population of the school: The school enrolment is one factor that influences resources provided. The number of students in a school will determine the number of teachers to be employed, the number of classroom needed and amount of grants to be given.
- 2. The type or nature of the school: The superiority and amount of resources made available to a school is influenced by its nature. A school offering general arts and social science subjects will attract fewer resources than a school that is comprehensive, technical and vocational oriented. Also the quantity of resources allocated to secondary institution varies in terms of quantities and qualities.
- 3. The Curriculum: The number and type of subjects offered in the school also determine the number of staff, physical and material assets (resources) to be provided.
- 4. The Philosophy of the Government: A government that is interested in the development and growth of individual citizen for the removal of illiteracy and development of manpower will dedicate more asserts or resources to education.
- 5. State of the Economy: A country that is economically strong, viable and has interest in education tends to allocate more money than a country that is economically poor.
- 6. The degree or importance or the value attached to Education: where education is seen as the, major avenue by which the economy can develop and grow, more resources will be allocated to the schools.

**Physical Resources**: The significance of education conveyed by teachers and the academic realization of pupils of any school is dependent on numerous factors of which school facilities is paramount. School facilities are physical resources that improve education thereby making the process significant and purposeful. School facilities

(equipments) can be referred to as school plant. The school plant is the space interpretation of the school curriculum. One way in which the curriculum finds its physical expression is via the construction and internal arrangement of the school plant. An effective school is a controlled environmental condition which aids the teaching learning process and at the same time protects the physical safety of the occupants.

School facilities (equipments) can also be defined as the entire school plant which school administrators, teachers and students connect, allocate and use for the smooth and efficient management or administration of any educational institution, for the key goal or objective of bringing about effective and meaningful teaching and learning experience.

According to Adeboyeje (1999) and Emetarom (2004), school facilities (plants) are the physical and spatial enablers of teaching and learning which will enhance the production of results. School facilities (plants) serve as stronghold of support for effective teaching and learning. Oyesola (2000) saw school facilities (plants) to include permanent and semi-permanent structures such as machinery, laboratory equipment, the blackboard, teacher's tools and other equipment (facilities) and consumables.

Oyedeji (2000) described school plant to include the site, the building and its development; it entails permanent and semi-permanent structure such as machines, laboratory equipment. Educational institutions, nursery to university require buildings for their effective operations. Classrooms, administrative offices, assembly halls, laboratory and staff quarters are required and within the buildings, there should be fixtures and fittings to make them useable. These facilities have to be adequate in number and they should all be in good state (condition) for schools to function properly.

There is an agreement among educators that schools infrastructural facilities enhance education when they are available in a fairly good number and quality. School facilities add to the ease, wellbeing and realization of students in academic and co-curricular activities. These in turn determine to a great degree the overall value of the school.

Akinsolu (2003) stressed the importance of physical facilities in the administration and management of educational system. In her study on provision and management of facilities for primary education in Nigeria, she noted that there is gross inadequacy in facilities for Nigerian primary schools with availability to required percentage ranging from as low as 1.5 to a maximum of 35.2%.

She opines that all stakeholders need to make sure adequate provision of physical

equipment (facilities) in all educational system, be it primary, secondary and tertiary levels to enhance learning and for improved productivity. Good superiority and standard of school depend mainly on the provision, sufficiency, use and management of educational resources.

Asiyai (2012:37) asserted that educational curriculum cannot be sound and well operated with poor and badly managed school facilities. Guthrie (2002) Encyclopedia of education defined physical resources as consisting of the land space, classroom, buildings, playground, school farm, laboratories, equipment and all facilities designed to enhance teaching / learning processes in the school setting.

Mbikpo (2000) saw physical resources as the total physical expression of the school syllabus / curriculum in construction, external and internal arrangement of buildings, equipment, and the general school environment. Uwheraka (2005) in his study showed that facilities below approved standard may result to decline in the quality and value of teaching / learning in schools, resulting to poor students' academic performance.

Newhouse and Beegle (2006) in their own study, revealed that higher quality input support higher test scores in the public schools in Indonesia. In the same vein, Murillo & Roman (2011) submitted that infrastructure impacts on the attainment of primary education students-in Latin America. Ogunrinde (1999) stated the environment of a college affects students since it can help or hinder or inhibit.

It can create atmosphere of dignity or decorum or anticipated adventure and discovery. The current emphasis worldwide among educational practitioner is on learner-friendly school environment with learner-friendly instructional delivery system. Nchor (1998) observed that instructional materials (resources) provide a solid basis for conceptual thinking raise the propensity of the brain to retain information, make learning more interesting and take care of differences that may exist among learners.

Oyedeji (2000) opined that physical resources, has positive impact on the comfort, safety, health and academic performance of student. He stressed the significance of physical resources, that it enhances psychological and physical safety for students and teachers as well as enhancing the value of instructions, for community use such as for extra-mural classes, adult education classes, meeting place, home economic centers, youth clubs, sport activities and public ceremonies such as marriages, concerts, public lectures, seminars, workshops and inaugural lectures, socialization and recreation purpose.

This was supported by Olaboye (1998:126), when he likened school plant to factory
plants in industry which include all those physical production factors or inputs, which facilitate outputs of the final products. He categorized school plant into eight components viz:

- 1. Buildings: Classroom blocks, Libraries, Laboratories, Workshops, Hostels and Staff Residential Quarters (where applicable) Assembly Halls, Administrative Blocks, Offices.
- 2. Equipment: Laboratory and Workshop Equipment, Sporting Equipment, Teaching Aids, Typewriter, and Photocopies, Computers etc.
- 3. Machinery: Workshop Machine and Tools, Duplicating and other Secretarial Machine.
- 4. Furniture: Classroom and Office Furniture, Hostel and Staff Residential Quarters, {where it exists) Furniture.
- 5. Books: Textbooks, Stationeries and Library Books.
- 6. Electrical Infrastructures: Overhead Electrical Conductors' Line, Meters, Generating Sets, Air Conditioners, Fans, and other Electrical Fittings.
- 7. Water Supply Infrastructure: Public Water Supply, Extension of School Boreholes, or Deep Wells, Water Tanks etc.
- 8. Vehicles

In Okeke's (1997) point of view school plant should be something more than a mere collection of classrooms of various sizes, in his view, for instructional programme to be truly effective, auxiliary space such as auditoria, food services facilities, students' common rooms, administrative and counseling offices and health annexes should be adequately provided. Oyedeji (2000) pointed out that, the term; "School Plants" include site, buildings and the equipment.

It embraces permanent and semi -permanent structures, also items such as machines, laboratory equipment, the chalkboard and the office assistant tools. Durosaro (1998) shared the same concepts of school plant with Oyedeji but extended his classification by adding transport. Fadipe (2002) concept of school plant is mainly non-consumable materials in school for the promotion of teaching-learning activities.

According to Oke (2004), school plants relate to entire scope of physical infrastructural facilities which are provided in the school for the use of educating the child. Any school facilities to be considered as an integral part of a physical plant must therefore contribute something to the education of the child. However, Olutola (1998) defined School Plant as; the site, buildings, the equipment and staff involved in organized instructional learning processes; the site include location accessibility, visual forms, climate and acoustics while the buildings relate to quality, design and adequacy for various uses, School equipment involves materials used by the instructional personnel.

From the forgoing, one can assume that school plant is the total school space and the relative available physical materials for use to achieve objectives and goals in Educational programmes. Suffice to ascribe that school plant is that which describes all the composite physical structures and facilities found within the four walls of a school, and that a cursory glance taken through the layout and arrangement tells much about the value and standard of the school.

Oke (2004) thus saw school plant as a controlled environment or setting that enhances the teaching-learning practice and can be illustrated as the physical school or the citadel of learning which serves not only the intention of habituating or accommodating but offers opportunities for exploration, unity, safety and all other activities that can promote educational purposes but it is also used to protect students and staff from the sun, rain and heat, if adequately provided, properly arranged, and well maintained. Oke (2004) simply conceptualized School Plant to comprise two dimensions viz:

**The External Facade**: Which is, the way the school is presented to its environment, the view of the people about the school and their disposition towards it. For instance, the visibility of the entrance of the school, the physical formation of the entrance of the school area and the implicit and explicit signs to be there, the degree to which what is going on in the school can be seen by those outside.

**The Internal Structure and Educational Furniture:** This has implication on administrator, teachers, students and other users of the school physical facilities. It contains the type, size and shapes of classrooms and offices which the personnel (teacher and students) use and the consequences of these facilities for teaching methods. It is worthy to note that school plant is related to the educational process which is the mean serving to realize the ends in the school.

Oke (2004), noted that School Plant comprise the school site, school buildings, external and internal environment of the school, supplies and equipment (registers, ledgers, record books, minute books and note paper) and staff, permanent equipment, library books and expendables stores. Furthermore, many educationists believed that school plant includes the school site, structures (buildings) and all equipment in the school.

Olutola (1998) for instance, viewed school plant as embracing permanent and semipermanent structure and items, as machines, laboratory equipment, the blackboards and the teacher's tool. In essence, they include the furniture, teaching studio, classrooms workshop and materials, and the 'space1 within the school premises. All these facilities contribute drastically to teaching / learning activities in the school. However, Ojedele (1998) conceptualized school plant to include school site, playground, sports, field and chairs, desks, lockers and tables. They also include consumable and non-consumable items. Succinctly speaking, school plant required by each school would vary from time to time depending on the size of the school, courses offered, programme orientation and level of education.

#### Types of Physical Resources

The School Library: - Library facilities are necessary at any level of education; it would therefore be of huge benefits if our secondary schools were equipped with it. A school library is an significant department of any institution which^ helps to promote the growth of knowledge; it is the heart of the school which stocks books in all subject areas plus non book materials which are related to all school discipline.

According to Fayose (1995), the school library is a resource centre where there are collections of books, periodicals, magazines and newspapers, film, filmstrips and other information resources for the utilization by teachers and pupils or students for learning interest. According to Ayodeji and Fabunmi (2004) school libraries are "the key stone of teaching / learning" the heart of the school.

Another definition of library according to Islam (2004) is a tool of self-education, a means of knowledge and accurate information, a base of intellectual recreation, and a symbol of hope of enlightenment that provides gathered preserved knowledge of civilization which as a result enriches one's mental vision, and dignifies his behaviour, personality, taste, mind-set, conduct, and outlook on life.

Omojuwa (1993) defined the library as an enabling factor to acquire spiritual, inspirational, and recreational activities through reading, and therefore the opportunity of interacting with the society's wealth and gathered knowledge. Online dictionary, Thesaurus and Encyclopedia described the library as a place in which literary and artistic materials, such as books, periodicals newspapers, brochures, prints, records, and tapes, are kept for reading, reference, or lending.

In a digital sense, a library may be more than a structure that houses a collection of books and other materials as the internet has opened up a massive of online and electronic resources for accessing documents on different fields of interest. Online Glossary defined Digital Library as a collection of texts, images, encoded so as to be stored, retrieved, and read by computer.

Another further advancement from the digital library is the advent of Virtual Library (VL). The library in any establishment or institution is the store house of knowledge. It is the

depository of information and information sources. It has major functions such as collection, organization, storage and dissemination of information.

It is a resources centre for students, teachers, researchers and others. Answers to specific and general information queries and problems are provided by the library (Olatunbosun, 2005). The school library has become a significant part of educational system especially in the school environment/setting as the effective teaching of the new curricular in school calls for multi-media resources which only the school library media can provide.

The National Policy on Education in Nigeria recognizes the significant role of the school library and media centre in the improvement of the quality and value of education in schools and has recommended that all schools be assisted to establish school library and media centers. Aderalegbe (2002) said that the school library helps to awaken and foster interest in reading so that students become familiar with books as source of pleasure and information. The library is a place for self-improvement.

It is also an asset to the instructional system to satisfy the inquiring minds of the students, and it is a doorway to the world of information and knowledge. The library should be well-equipped in terms of furniture such as tables and chairs. There should be a librarian, who directs the affairs of the place suitably and peacefully.

The school library functions as vital instruments in the education process, it is not a detach entity isolated from the total school programme but totally inculcated into the teaching / learning process of the school. It provides ranges of books and non-book materials which have been selected, acquired and organized for use in the support of the whole school programme, they include:

- i. Books, general reference, non-fiction and fiction, periodicals pamphlets, brochures, handbills and ephemeral notices.
- ii. Audio materials-discs, phonographic, records audio tapes on cassettes.
- iii. Film materials-slides, film-strips motion image films and other kindss of photographic film.
- iv. Graphics art, print, pictures, photographs, maps charts and overhead transparencies.
- v. Video materials video tapes on cassettes, cartridges and video disc. (Ola, 1990:17)

The school library should be a learning centre where students find information to assist them both in their school subjects and their personal developments. The textbooks they use and the notes they take in class can be excellent information for further developments. The notes can also be supplemented with library books for their revision during examinations and also be utilized by student to write a good essay or carry out group project.

Other sources of information such as references, fiction and non-fiction, books, journal and magazines and the variety of non-book media stocked in the school library have to be used by teachers and students. To facilitate the effective use of media resources, teachers and pupils should be given orientation as to the fundamental skills they require by either the teacher or the librarian.

The selection and acquisition of these material of modern instructional methods (slides, tapes, film and all film strips, circuit television) requires the service of a librarian who is not only knowledgeable enough to understand the need for them and to know how and where to obtain them but also, one who is sufficiently imaginative and creative to be capable to anticipate them long before the need becomes obvious even to potential users.

Through its professional staff, the library offers personal service in the form of counsel direction and instruction, all of which enhance the educational development of students. Oyedeji (2000) suggested that library facilities should not be over looked because it is a store house of knowledge where academic information can be extracted for better academic performance. Adaralegbe (2002) enumerated the following importance of secondary schools libraries to:

- i. Acquire books and other resources to meet the needs of students, to manage the material for effective utilization.
- ii. To develop in students the skill and resourcefulness needed for a profitable utilization of books and libraries and cultivate in them the habit (character) of individual investigation.
- iii. To institute a range of important interest in students. iv. To provide sufficient experience in social and decent living.

Akubue (1991) noted that there are various ways in which we can describe the significance and value of a school library:

- i. In the library, more knowledge is gained from books read by students outside the classrooms than in class activities.
- ii. The validity of what the teacher teaches in the classrooms can be tested by the students by literature reviews of books stocked in the library.
- iii. In using the library, a student is competent to follow up a lesson and thus add to his store of knowledge.
- iv. It houses resources materials that are not easily available like government document encyclopedias and reference books.

- v. It provides a place of reading for enjoyment like dallies fictions, folklore and poetry.
- vi. It enables a school to implement the curriculum syllabus of studies.

Elkhana (1997) also identified the following importance of library in secondary schools:

- i. The school library promotes the advancement of reading interest and habits. Reading is a key to continuous success in schools, and to the personal enrichment of life.
- ii. The school library contributes to academic accomplishment in all subjects. Research studies and project reports on school library have found that a good library is one of the most significant factors contributing to student's academic success or attainment in reading, modern languages, mathematics, science and other subjects.
- iii. The school library can increase students' chances of success in higher education or after professional pursuits.
- iv. The school library can present students with vocational information leading to the choice of a suitable carrier.
- v. The school library can help in realizing and developing the special gifts and talents of students.
- vi. The school library trains students to study independently by providing variety of or ranges of materials for class project individual project reports and class assignments. It is the training ground for self-reliance, self- discipline and perseverance.
- vii. Information Source: It teaches students in the exploitation and utilization of books and library as source of information.

It also offers children opportunities to exercise responsibilities of various kinds. The school library serves as the centre of the academic life of the school and available all times for reference, for study and for private reading. A school library increases and enriches work done in subjects taught in the school.

It should support the teaching of the subjects in the reading and further study and a place where it can conveniently be consulted. A school that succeeds in inculcating in students a reading habit in the library will experience fewer disturbances from students who may be tempted to waste their free periods.

To encourage its maximum use and to build interest in utilizing it as a learning centre, the library must be well-equipped, properly organized with attractive arrangement of furniture and shelving. After all these, it is vital to make sure that students derive maximum benefits from the library. Through libraries services, schools do exercise fairly

good measure of control over students' behaviours.

**The School Laboratory**: Laboratory is very vital in all schools for effective and efficient teaching / learning of science subjects and other subjects allied to the attainment of needed educational objectives and goals. A laboratory may be defined as a place equipped for experimental study, that is, the world" Laboratory" in the minds of most people is synonymous with scientific investigation.

Adeyinka (1992) noted that for effective, effecient teaching and learning, well equipped laboratories and subject rooms are needed, but the truth is that majority of Nigeria secondary schools today lack these fundamental facilities. In the past educational systems, laboratories used to be thought of as exclusively for the science subjects like Biology, Physics and Chemistry but nowadays, laboratories for languages and some other subjects have been introduced and have come to stay.

The West African Examinations Council has now mandated a well-equipped laboratory for the teaching of Biology, Physics, Chemistry and vocational subjects like Home Economics, Technical Drawing and Wood Work in schools. Daramola (1994) noted that laboratory environment is an indispensable factor for understanding of concepts, principles, and application of knowledge.

Recent concern being in this area a way to improve performance in science and to have positive attitude to science is a highly welcome development in curriculum development .He said there is the need to pay more attention to peripheral things such as the teaching and learning setting / environment which can have an enormous effect on students' attitudes to certain subjects.

He observed that laboratory environment perception can stimulate the relatively low percentage of female enrolment on physical science especially in Physics. A deeper and better understanding of the science and technology processes can be achieved through laboratory activities, which encourage active participation and serve to develop critical thinking.

They provide concrete experiences to substantiate the theoretical aspect that has been taught, pupils at the secondary level will not only be taught the theoretical feature of these subjects using laboratory but also become familiar with the concrete things as they perform practical in the laboratory (Akinsolu,2012). This will give the pupils ample opportunity to widen manipulative skills that will make them to function effectively in the society within the reach of their capacity.

Abdullahi (1990) emphasized that laboratory is the centre of attention at all levels of science teaching and a medium of which meaningful learning in science can take place. Research on Science teaching identified three (3) rationales generally enhanced by those that supported the utilization of the laboratory in science teaching.

The rationales included:

- 1. The subject matter of science is remarkably complex and abstract.
- 2. Students need to participate in enquiry to appreciate the spirit and methods of science.
- 3. Practical work is basically interesting to students. Shulman and Tamir (1973) also compiled a list of objectives of utilizing laboratory work in science teaching.

They includes the teaching / learning of skills, concepts, attitudes, cognitive abilities, and understanding the nature of science. All science curricula in Nigeria list practical activities that-1 should go with each curriculum item listed. The current West African Examinations Council (WAEC) syllabus in use for 2009-2012, recommended that the teaching of all science subjects listed in the syllabus should be practical based, perhaps, to display the importance it attached to practical work in science.

According to Abdullah (1990) the laboratory gives the students appreciation of the spirit and procedure of science; it promotes problem-solving, logical and generalization ability. It helps students with some understanding of the nature of science. Some other review of the literature revealed the following goals for laboratory instruction in science education to:

- 1. Arouse and maintain interest, attitude and curiosity in science.
- 2. Build up creative thinking and problem solving ability.
- 3. To promote aspects of scientific thinking and scientific method.
- 4. Develop conceptual understanding.
- 5. Develop practical.

Anderson (1998:20) summarized the goals of laboratory work into four main domains to:

- i. Foster knowledge of the human endeavor of science to enhance students' intellectual and aesthetic understanding.
- ii. Foster science inquiry abilities that can be shifted to other field of problemsolving.
- iii. Help the students understand and in part imitate the function of the scientist.
- iv. Help the students grow both in understanding of the organization of scientific knowledge, understanding the uncertainness nature of scientific theories and model.

Ogunwole (2010) expressed that students taught Physics by chalk and talk lecture approach demonstration recorded poor or pitiable academic performance and poor student motivation. This is manifested in the massive poor performance of students in both internal (within) and external (outside) Physics examinations.

Adesina (1984) were of the view that science teaching in Nigerian secondary schools should be influenced by the current winds of progress that affect the building of science laboratories. This will create more spaces in the science laboratories with simple access to utilities like water, electricity, which should be available all the time for performing experiment effectively by the users and for better result.

They noted that whatever was learnt by the students by hearing are not forgotten easily and whatever are seen, observed; handled, are known very well; remembered easily and could be recalled whenever the need arise, students performed exceptionally well when they are involved in the process of inquiring and investigating, most especially when they are involved in experimentation.

## Classroom

Classroom can be described as a space where effective teaching / learning takes place in other to realize educational goals and objectives. Oyedeji, (2000) cited classroom as a space earmarked specifically for the business of teaching / learning implying that there will be a teacher and learners engaged in series of interactions aimed at achieving educational goals at one time or the other and this is why Abdulkareem (1997) likened it to a factory for setting up raw materials except that the latter are human beings. Ogunu (2000) defined classrooms as an instructional setting for teaching in its most common form.

It is a place where a teacher and twenty or more students meet regularly for a designated period over an interval of four to nine months. Classroom operates under a form of rationality which specifies that activities involving all students must have an educative justification. For effective teaching and learning to take place, there should be conducive and comfortable classroom.

Ogunu stressed that "class size which could be effectively managed by the teacher requires materials or resources for better learning. This will consequently improve students' cognitive domain". Olatunbosun (2005) said that classroom is one significant place in the operation of a school which holds students together and offers them the opportunity of attaining the purpose of education.

Students bring into this room various traits arising from attitudes, social class ethnicity,

bias, idiosyncrasy, whims and caprices. They bring in all these things and even more which may require conscious manipulation, if instructional goals must be achieved. Finally, it is a place where learning experiences are coordinated and where different kinds of instruction efforts are housed.

The recognition of the function / role of teaching / learning has resulted in a corresponding awareness of the need for a classroom space adequate for multiple activities. The increased concern for children as individuals has promoted many attempts at creating more flexible classroom with provisions for diversified arrangement and activities in terms of desires to be met.

The effort to unify learning experiences through the unit approach and other devises requires classrooms which can house different types of instructional materials. Classroom should be made a happy place since children spend about a part of their working hours a year in them. A good classroom has been seen as a base for all types of activities, it is an art gallery, museum, workshop, display centre and exhibition area.

An alive classroom produces a lively class. It is alive when its surroundings are made beautiful, imaginative, stimulating, exciting, and enjoyable. If it has some creative order, it is an sign of an atmosphere of purposefulness. The organization of its space dictates to a substantial degree the quality and value of life lived within it.

Human Resources Education is a systematic teaching for the improvement of character or psychological power. According to Rao (2001) Education is tantamount to learning, instruction, teaching, acquiring knowledge and guidance. The success of every teaching / learning system depends only on the quality and quantity of its factors of production human and material resources.

Of all the factors, the human resource shows to be the most vital because without human labors, all other factors are inept. Oyedeji (2000) viewed manpower in education to consist of teaching and non-teaching staff available to carry out the necessary work and services that are designed for the realization the set goals and objectives of education.

Nmadu (1998) noted that the human resources of an organization consist of individuals, regardless of their roles who are engaged in organization's activities. The human resources in the teaching and learning system remain the motivating force of other resources. Human resources are the beings that are concerned with the running of the educational institutions towards achieving her stated objectives.

Oni (1995) discovered that human resources play the most vital role in the teaching and learning situation than any other factor of production in the school system. Aihierbolana (2005) ascertained that he school is essentially human organization because it has human operatives, clients and products. In the same vein, the Nigeria Education Research Council (1980) emphasized that for a good educational policy or programme to guarantee quality output, it must be serviced optimally with appropriate trained and motivated teaching staff. Lassa (2000) claimed that education cannot be provided by just anybody.

It requires a teacher who plans and delivers the lesson or constructs it in such a way that the goals of education can be achieved. The business of the school is to educate, and the most significant resource in the school is the teacher. Teaching is indeed a demanding profession and the teacher is the key factor in the learning setting / environment of the child (Peretomode 2001).

This has explained why the Federal Republic of Nigeria (2004) stressed the need to accord Teachers' Education a major place in Educational Planning. The Policy further continues that among other things, the goal of administration should be; to produce highly motivated, diligent and efficient classroom staff with intellectual and professional backgrounds, sufficient for their assignment and to make them adaptable to any challenging conditions, not only in life of their country but in the wider world.

The Nigeria National Policy on Education (FGN, 2004:17) states that "no educational system can rise above the quality of teachers in the system". This shows that an uncertified teacher cannot prepare students for WASSCE/GCE because it is unlikely that they could pass. Corroborating this, Owolabi (2007), stated that government should find all possible means to hold on to veteran and experienced teachers who are still eager to serve so they can contribute their wealth of experience to enhance the education system.

Bada (2011) noted that schools with stable, experienced and qualified teachers usually have better school plants in terms of school buildings, books and equipment than those schools which have difficulty in attracting experienced and qualified staff.

#### The Concept of Human Resources Management

Human resources are the most dynamic of the whole organization's resource. They need significant attention from the organizations management if they are to attain their full potentials in their work. The success or accomplishment of the school system is moved towards improvement of productive abilities of people at work. These abilities are in the pursuit of attaining educational goals and objective and satisfying the need of the

individual staff.

Human resources are seen as the greatest and most precious asset or factor in the production process of education. Ndiomu (1992) stressed that the indices for measuring national growth and development hinged on the conditions of the human resources that such a nation possesses. However, poor staffing has been a recurring feature in the country's educational system.

Also, Frankie-Dolor (2002) asserted that of all the rudiments for effective management and administration of an organization, the most essential is the human resources. The success and the accomplishment of any type of organization, be it social, political religious or economic, rely to a high extent on the human- beings that make up the organization.

Human beings take decisions, which provide the knowledge, energy and the cooperation through which organizational goals and objectives are achieved. The primary and foremost purpose of school personnel management is to secure sufficient number and categories of suitable teachers and support staff to undertake the task of educating the student to the standard expected by them, their parents and the society at large.

It is the responsibility of the management to organize and mobilize the human resources for effective attainment of the instructional goals and objectives. Human Resources Management was described by Alabi (2003) as an important management that is concerned with obtaining, developing and motivating the human resources required by an organization to attain its objective.

From this definition, it could be observed that human resource management encourages making the best utilization of the skills and capabilities of all those employed in the organization with the view to achieving the potentials of individuals, employees and organizational objectives. To a very high extent, the success and accomplishment of any educational system relies on the human elements within (internal) and outside (external) the system.

It is however one thing for the human resource to be made available and another thing is to be effectively developed and managed. Adesina (2007) saw Human Resources Management as requiting adequate and qualified staff, developing and maintaining the staff so that they would be willing and able to deliver effective and efficient educational services to the student within the school system.

He also described the concept is been charged with attracting, motivating, retaining and

developing the right number and quality personnel. Human resources is part of the process of management, seeking to make sure that the objective of the organization are met. Human Resources Management is the function within an organization that focuses on selection, recruitment, management, and providing directions for the people who work in the organization.

It is the organization functions that deals with the issue related to people such as compensation, organization hiring, performance, safety management, development, wellness, benefits, employees motivation, communication, administration and training. Oyedeji, (2000) describes the concept as the effective use of human resources in an organization through the management of people and related activities.

Such management include: recruitment, selection, counseling and promotion. Ogunsanju (2000) defined Human Resource Management as the effective mobilization of human resources based upon appropriate recruitment selection, training and placement of appointed staff in a way to attain the set goals and objectives.

In a school system, the general goal of the Human Resource Management is to see that the students receive educational services through the effort of the school personnel. (Oyedeji, 2000) This implied that the personnel management services in the school systems are geared in the direction of the attainment of educational objectives (student's academic performance).

In this regard, it happened to be imperative that management must recruit sufficient and qualified staff so that they will be willing and able to render effective and efficient educational services to the students. For this reason, sufficient and qualified teachers must be supplied to face the task set for them in the school system/environment.

For this to happen, certain procedures and steps must be taken to provide the essential services in the schools (Tijani, 2011). These include: staffing, selection, staff training and development programs, reimbursement and staff wellbeing and finally the performance appraisals.

#### Availability of Human Resources (Teachers) in UBE Schools

The readiness of human resources is very-important because of its significant role in the success and achievement of educational objectives. Human resources is a unique educational input needed for the general development of skill acquisition and literacy of the students.

Ekundayo (2009) in a study conducted in Ondo State submitted that primary schools had educational materials better than the junior secondary schools. Studies on the

relationship amid availability of human resources and academic performance have shown that human resources improve academic performance of students. George(1976), Oni (1992), Adedeji (1998), Ayodele (2000), Adewuyi (2002) and Okandeji (2007) had in their various researches submitted that teachers constitute a very significant factor to students' success. Similarly, Nakpodia (2000) opined that human resources (i.e. teachers) are important prerequisite for national development in a way to attain the preferred outcomes of any establishment (i.e. the UBE programme). These objectives no doubt are laudable and their advancement depends on factors such as provisions of well trained teachers, textbooks, equipment and facilities (Olubor, 2000).

Dowies (2001) also opined that, if the mission of the UBE is to channel the desired skills, attitudes and abilities of its graduates toward self-sustaining creative abilities, it should take serious and make sufficient provision for the preparation and training of skilled human resources (teachers) in order to effectively manage not only the educational setting/system but the entire nation/country.

On this plane, it is pertinent to realize that manpower is the most significant resource in any organization. Hence perhaps, Harbison (1973:3) asserted that: '... human resources - not capital, not income, not material resources - constitute the vital basis for the economy of nations, capital and natural resources are passive factors of production; individual beings are the dynamic representatives who build up capital, develop natural resources, build social, economic and political organizations and advances national development. Consequently, a teacher plays a vital role and function in the procedure of teaching and learning.

Nevertheless, he is the change agent that harnesses other resources for production function. In support of this, Nwagwu (1998:182) emphasized that, "the concept of education by itself implies the existence of teaching / learning, hence the mention of the word school evokes automatically the picture of teachers and students interactive environment/settings.

Teachers are the cornerstone or the hub of any educational system. Adesina (2007) notes that inadequate teaching (academic) and non-teaching (non-academic) staff is a bane to successful achievement of quality UBE programme. Shulman (1988) classified the teacher as a major factor in student learning.

Ukeje (1992) writes that teachers are the pivot of any educational system, and that upon their number; their quality and devotion depend on the success of any educational system. Ajayi (2000) carried out a survey of supply of teachers for UBE scheme in Oyo State. He stated that the problem of teacher supply was not concerned with mere number but basically with quality of teachers essential for effective utilization.

In his study on resource concentration, utilization and management as correlates of students learning outcomes in Abia State, Farombi (1998) noted that classroom learning environment in some schools was poor. Human resources in education are the students, teaching staff, bursar, non- teaching staff, librarian, clerks, laboratory attendants, messengers, gardeners, gatekeepers, cooks, educational planners and administrators (Ebong, 1999). The success or failure of the UBE will depend upon the teachers based on the nature of the programme.

The number and quality must be thoroughly planned to ensure sufficiency of the teachers quantitatively and qualitatively. Adamaechi and Romaine (2000) are of the view that the short supply of teachers result to the employment of "market women" half-baked individuals. This view reinforced by Ezeocha (1990) as reported in the work of Odo (2000) stated that the crash programmes of the UPE attracted the wrong caliber of people into the teaching profession, people who neither had the make -up nor commitment to do the job.

Nevertheless, in spite of such crash programmes and subsequent recruitment of mediocre sub-standard teachers, teachers were still grossly inadequate, Dareng and Attah (2000) quoting (Lassa, 2000) said teachers are nation builders and as such their training will equip them for laying a concrete educational foundation right from the primary level.

#### **Teachers' Qualifications in UBE Schools**

Adesina (1980) and Oguntoye (1983) expressed the qualification and expeirnce of teacher as a pre-requisite to the quality and value of students' performance. Fagbamiye (1977), reports that teacher quality as measured by qualification is related to achievement and more predictive of students' performance.

In a comparative study on correlates of school extrinsic variables with students' academic attainment in science utilizing a target population of 182 Secondary Schools with 20 schools randomly chosen to represent each of the three (3) science subjects; Physics, Chemistry, and Biology in Bendel State. Arubayi (1987) found a positive relationship between the independent variables of laboratory facilities; recommended textbooks, number of science books in the library and teachers' qualifications and the dependent variable, the academic attainment of students in physics, Chemistry, and Biology.

Hallak (1990) concludes that student academic performance relies mostly on the qualification of teachers that teach them. Amoo (2003) in noted that "demand and supply of teachers in Osogbo Local Government Area of Osun State, Nigeria, he identified wide gaps between the demand and supply of qualified teachers in the state.

Shortage of qualified teachers demand as revealed by the findings of his study was expressed as 44% in the 1999/2000 session, 56% in the 1980/81 session and 51% in the 2001/2002 session. The success of any organization is a resultant effect of the quantity and quality of its work force. Ayodele (2000) has argued that no matter how well-organized and effective an administrator is, he hardly achieves success without the support and cooperation of well-qualified and dedicated staff. Highly qualified teaching staff is education best resources and assets.

Aihievboloria (2005) ascertained that the school is an essentially human organization because it has human operatives. The need for satisfactory staffing is clearly demonstrated by the way secondary school students keep on to moving from one school to another in hunt of schools with better qualified teachers.

According to Akinsolu (2010) in his survey "Teachers and Students Academic Performance in Nigerian Schools: Implication for Planning," he revealed that majority of the teachers in her study hold the NCE certificate in Osun State Public Secondary School teaching Personnel. NCE teachers are meant to teach in the primary schools. Akhaine (2001) reported that with the rise in the supply of qualified teachers from different higher institutions in the country, more teachers should be employed into the school environment/system. The high number of teachers who had B.Ed level of qualification was probably as a result that teachers have been accorded the status of professionalism and no teacher is expected to teach in Nigerian schools without teaching qualification.

Adebimpe (2001) opined that for the UBE to succeed, sufficient and adequate provision should be made to create sufficient qualified teachers and make them imperative within the limit of their area of specialization. Coombs (1968) as cited in Nwagwu (2000) had emphasized the significance of teachers in the education enterprise. He said that teachers next to students were the largest and most expensive inputs.

They are required in large numbers but there is also the critical need to have the right quality. Odo (2000) posited that in a bid to meet up with the increased demands for teachers, government may recruit those much less qualified to teach. As a matter of facts, this is already happening in the system.

At present, some non-professionals are being specially employed for the purposes of the UBE scheme with the hope that quick orientation / training will be given to them after which they will serve as teachers under the scheme (project). The connotation of this is that teachers will either be overloaded, or they may not be of the right caliber in terms of training and experience.

It could appear that the administrators have opted to recruit and hurriedly train emergency teachers. Nwangwu .(2000) is of the opinion that organizers and managers of the UBE programme phase the implementation and respect the policy's decision in the National Policy on Education that National Certificate of Education (N.C.E) should be the minimum qualification for teaching.

The National policy on Education (Federal Republic of Nigeria, 2007: section 63) stipulates that the minimum qualification for entry into the teaching profession at any level in the Nigerian school system should be the Nigeria Certificate in Education (N.C.E.). However, the NCE teachers have limited subjects' specialization where the teacher trainees are trained in two (2) basic teaching subjects.

Mkpa (2000) thinks the mistake of the past must not be repeated in this new dispensation where quality of teachers recruited for the programme was grossly defective since the quality of teachers is a main determinant of the level or degree of success of the Universal Basic Education. Ogunu (2000) laments the rate of many teachers in UBE schools still teaching courses without any specialized knowledge and skills in the subjects.

In a related work, Ilaiya (2009) acclaims that the real implementers of UBE programme are the teachers. She opined that teachers are significant in the implementation of the programme. That it has been adequately demonstrated in Nigeria that no amount of planning or funding will ensure the success of Universal Basic Education unless teachers implement it effectively in schools; her stand being that most of the discussions about teachers have centered on number rather than quality or the welfare of teachers.

Notwithstanding the laudable objectives of UBE, Enueme (2002) reported that one of the several limitations to the execution of the programme was the long absence of an enabling law since 1999 when the programme was launched. He argued that the effect of this long setback is the refusal of the government to employ teachers for the programme.

Since its inauguration in 1999, available infrastructural facilities, teaching and learning materials and qualified teachers are perhaps grossly inadequate in schools. Ogbuka

(2000) reported for instance that out of 21 million children of primary school age in 1996, only about 14 million were enrolled in schools. The completion rate was 64.1% while rate of transition to the junior secondary school was 39.8%.

He added that, the situation in junior secondary schools was not better. He said out of the total population of 7.2 million children of 12 to 14 years old in Nigeria, only 2.4 million pupils were enrolled in school. This was manifested at the sight of many children of school age wandering the streets in many Nigeria villages and cities during school hours.

## **Teachers Years of Experience in UBE Schools**

Adesina (1980) and Oguntoye (1983) expressed the experience of teacher as a prerequisite to the quality of students' performance. Fagbamiye (1977) reported that teacher quality as measured by experience is related to achievement and more predictive of students' performance Enueme (2002) is in the line with UNICEF recommendation that child friendly school is influenced by the teachers teaching experience that those with high teaching experience accepted the UNICEF recommendation for child-friendly school; more specifically, she said the acceptance level of teachers with 26 years of experience and above is highest.

Adamaechi and Romaine (2000) feels it is extremely wrong to isolate planners from those who will implement the UBE programme and advocate that experienced teachers be given the opportunity to help in the planning and execution phase for the UBE to succeed. Imogie (2000), believe that if UBE makes it unavoidable for teachers to be involved in in-service training, workshop of different kinds in related areas and conferences, national and international, they will update their knowledge and widen their scope of experiences, as this experience in turn will benefit the students.

Mkpa (2000) also thinks mentoring is very efficient and cost-effective approach to staff development. The fewer teachers who is connected to the mentor consult the later on all matters and is properly guided in her professional activities. Enoh and Okpede's (2000) opinion is that teachers who are in the field are expected to implement the UBE scheme.

Also, they have to be trained for different educational purposes, so that when they are required to implement this new scheme, they can survive because they are inexperience. Uwameiye and Osunde (2000) worry over the fact that teachers who constitute part of the stakeholders and primary implementers of the UBE programme cannot conceptualize what the UBE programme is all about and do not possess the training for the implementation of UBE programme.

They therefore implore the government to encourage in-service training. Odo (2000) says that in a bid to meet up with the increased demands for teachers, government may recruit those much less qualified to teach. As a matter of facts, this is already happening in the system. According to Akinleye, (2001) and Ijaiya (2000) opinions about teaching experience.

Their opinion center on the fact that experience enhances teaching skills while students learn better at the hands of teachers who have taught them continuously over a period of years. Findings of Ruggai and Agin (2008) also established that teachers' experiences and qualifications have a potent impact on their job performance. They concluded that experienced and widely trained teachers perform well than a less-experienced teacher with a lower level of training.

Adeyemi (2008) explained that schools having more teachers with five years and above teaching experience achieve better and preferred results than schools having more teachers with less than five years' teaching experience. This is in agreement with the findings of Olokoba (2000); Ijaiya (2000); Richard and Barbara (2002) who found that experienced teachers were more productive than their inexperienced counterparts.

#### Teacher's Utilization (Teacher-Pupils Ratio) in UBE Schools

Utilization according to Ngurukwem (2005) is the proportion of the available time a system is operating. In terms of educational resources, it could refer to the degree of available resources that are put to use. Class factors are very imperative in the teaching-learning activities, particularly when students' academic performance is being considered.

Class size is a significant factor in relation to academic performance of students. There is an agreement among different researchers and educationists that, the lower the class size or teacher-pupil ratio, since students' achievement reduces as class size increases. Many studies have noted the importance of teacher pupil ratio to cognitive learning in the school. (Idienumah, 1987; Ojoawo, 1989; Fabunmi 2000).

The National policy on Education (2004) recommended that the teacher-pupil ratio should be 1:35. In emphasizing the significance of class size to the learning / teaching process, the All Nigeria conference of principals of secondary schools (ANCOPSS) recommended a maximum of forty (40) students per class for efficient and effective management and better control.

Oni (1995) viewed under-utilization of teachers as one who handles less than the official number of 18 periods a week in secondary schools. The implication of this is that they are over utilized when they teach over and above these conventional periods. Similar to this, the policy guideline for the implementation of Nigeria Education system likewise recommend a minimum of 18 periods a week and a maximum of 22 periods per teacher per week. Agenta (2004) reported variation in teachers' workload in Nigeria schools. The result of Tijani (2011) is the same with Agenta (2004).

In his own study of supply and utilization of teachers for students' academic performance in Kwara state Secondary Schools, he discovered that the average number of periods per teacher in the state is 15 (fifteen) periods which shows that, all teachers in the state are underutilized. However, Nwagwu (1998) study is contrary to Agenta (2004), and Tijani (2011) in his study, findings discovered that many states of the country; primary and secondary school teachers teach as many as 30 periods a week that is an average of 6 periods a day. In short they teach from the time they arrive to the time school closes.

According to UNESCO (2000) standard and that of National Policy on Education (NPE, 2004) specifying a maximum of 35 or 40 students per teacher respectively. Also Akinsolu, (2011) in his study on teachers' utilization in Ondo State Public Secondary Schools, Nigeria: some planning implications, he discovered a FETSR of 1:67 which shows over utilization of teachers in the state. The findings of this study are also in support of the findings of Ebong and Agabi (1999).

They examined the level of wastage in manpower utilization in the cross rivers state- The data analysis reveals a gross wastage of teachers through over utilization due to an overall scarcity of teachers in the system. The nature of wastage was attributed to work overload in the form of excess teaching period in some subjects and high teachers' pupils' ratio.

The relationship between class size and academic performance is a major controversy. The lower teacher-pupil ratio allows for more effective communication between the student and the teacher. The effect of class size on cognitive attainment has been discussed and researched for many years and has been inconclusive.

Robinson (1990) opined that even with these methodological problems, research has generally demonstrated the influence of class or teacher -students' ratio on student's performance in different educational setting. A study by Idienumah (2008), reported that there is positive relationship between certain variables such as class size, teacher - pupil

ratio, students factors and performance in examination. They were revealed to be factors that have strong and unswerving influence on academic performance of schools.

Schools with larger class size and high teacher-pupil ratio recorded poor performance while better academic performance is related with schools with small size and lower teacher-pupil ratio. Other studies like Bozzomo (1978), Bourice (1986) and Bolton (1988) confirmed that there was no relationship between the size of the class and the results.

Ojoawo (1989) in one of his key findings showed that the class sizes were discovered to be negatively related to school academic performance. Boltori (1988) found that "there was no significant difference in post- test achievement scores between large classes and small class control groups in developmental English". According to Bolton's (1988) experience, "larger is sometimes better".

Edge (1980) identified two of the problems, which large classes pose, they are (1) the provision of an chance for discussion or for any kind of oral input to the written work is difficult; and (2) the amount of making involved can discourage even the not passionate teacher from setting the amount of written work that he feels would benefit the students.

Coleman (1987) stated that for enthusiastic teachers, "if classes are very large, it is imperative that as far as possible, the students should be continually busy and the tasks should function always without repetitive intervention from the teacher". Nevertheless, most parents, teachers and students have a strong conviction that small group classes are preferable to large ones.

As Bolton (1988) put it "there is, after all, an orthodox tradition to the proposition that small classes are essential for student achievement". In some of the experiments performed, Roe, Stoodt, and Burns, (1987) discovers that" in reading scores on individual tests, the smallest classes were significantly higher and the largest classes were lowest of all".

As a corollary to this, Smith and Glass (1980) shows through meta-analyses that compare to large classes, small classes lead to higher pupil achievement, more favorable teacher effects (e.g. moral, attitude towards student) greater attempts in individual instruction, a better classroom climate and more favorable student effects (e.g. self-concept and participation). Me Daniel (2001) conducted a survey on class size" the results of the study showed that class size whether large or small was not associated to academic attainment of pupils in a standardized accomplishment test in mathematics, reading and language".

Adeogun (2001) noticed high student- teacher ratio in most public upper and lower Basic schools. This is as an outcome of non-recruitment of additional teaching staff to meet up with the increase in the enrolment, which in turn affects the educational quality. Ashworth and; Harvey"(1994) remarked that teachers are the most imperative resource in school and emphasized their maximum utilization for effective learning to take place. Fernandez and Timpane (1995) give a report on a study conducted on the effect of overcrowded conditions on students' achievement and teachers' efficiency.

According to this report, "teachers say that over-crowded schools are noisier, that they create more non-instructional duties and paperwork, and that, without question, they inhibit teaching and learning". According to Badejo (1996) and Adeyemi (2007) the deplorable situation in public primary and junior schools based on the inadequacies of government against the provision of the National Policy on Education (FGN, 2004) is affecting public school population as students are now being enrolled in private institutions which seem to provide childhood education that embraces "play" as a important technique in the development of the mind of children.

Equally, Akintola (1981) and Adeyemi (2007) posited that in public schools, pupils learning environment typically has few facilities, and classes consists more than 50 pupils (higher than 1 to 30/40 standard indicated in the National Policy on Education (FGN, 2004). He stated that the problem of teacher supply was not concerned with mere number but basically with quality of teachers needed for effective utilization.

# Measurement of Teachers' Utilization

The rate of utilization of teachers can be measured through the pupil-teacher ratio.

It refers to the number of learners assigned to a teacher at a time

to teach. It is simply determined by finding the sum total of all the learners in an institution of learning and dividing by the number of teaching work force, that is:

Pupil - teacher ratio = <u>Total number of students</u>

Total number of teachers

If three teachers are assigned to a group of 90 pupils,

The pupils: teachers' ratio = 
$$\frac{90}{3} = 30:1$$

The shortcoming of this method lies in the fact that it does not give detail information about the utilization of a teacher. Roach (1995) in Akinsolu (2011) proposed another ratio, which is the Full -Time Equivalent Pupil- Teacher Ratio (FETPR) and this was adopted by International Institute for Educational Planning (IIEP- UNESCO).

The Full Time Equivalent Pupil- Teacher Ratio (FEPTR) is calculated as follows:

Mathematically: FEPTR = No. of Students

#### F.T.E

Where the Full Time Teacher Equivalent (F.T.E) is derived thus:

Mathematically: F.T.E = Total No. of Periods Taught

Normal Teaching Periods of one Teacher

For example, assuming 22 periods are the normal working load for a teacher:

- 1. English teacher teaches 24 periods
- 2. Home Economics teacher teaches 15 periods
- 3. Social studies teacher teaches 10 periods

Total = 50 periods.

This indicates that some teachers are not fully engaged, the Full- Time Teacher Equivalent will now be calculated thus:

F.T.E. = 
$$\frac{50}{22}$$
 = 2.27

To calculate FEPTR, the number of pupils must be known, and assuming the number is still 90. Instead of the initial students-teacher ratio, which is 90/3 or 30:1, for the FEPTR, we divided the No. of students by the calculated F.T.E. and in this case by 2.27. The Full-Time Equivalent Pupil- Teacher Ratio is given by:

$$FEPTR = \frac{No. of students}{F. T. E.} = \frac{90}{2} \cdot 27 = 39.6:1 \text{ Approximately 40:1}$$

This method provides an in-depth information on the over and under-utilization of teachers within the school system.

Utilization of teachers can also be measured by using the official number of period assigned to a teacher to teach within a week. Tijani (2011) viewed under- utilization of teachers as one who handles less than the official number of periods (18 periods) primary and secondary schools.

The conclusion that could be drawn from this is that teachers are optimally utilized when they either teach students with a conventional student- teacher ratio of 1:30 minimum or 1:40 maximum as prescribed by the New National Policy on Education; and or teach exactly the conventional minimum of eighteen (18) periods or maximum of twenty two (22) periods per week.

#### Availability of Physical/Material Resources in UBE Schools

Physical and material resources are other predictors of quality in UBE School. A close look at the UBE schools and what goes on there shows that nothing good can come out of most of them, as they lack facilities and adequate and suitable human resources to prepare candidates for Certificate Examinations (Owoeye & Yara, 2011).

Adeogun (2001) revealed a very optimistic and important relationship between instructional resources and academic performance. According to him, schools endowed with more material resources performed brilliantly than schools that are less endowed. Adeogun found further that instructional materials increase teachers\* effectiveness in the classroom because they augment, complements and supplements their effort.

Fernandez and Timpane (1995) give a report on a study conducted on the effect of over-crowded conditions on students' achievement and teachers' efficiency. According to this report, "teachers say that over-crowded schools are noisier, that they create more non-instructional duties and paperwork, and that without question, they inhibit teaching and learning".

River-Bartlz and Marti (1995) found that over-crowding, due to inadequacy of physical resource affected both classroom activities and instructional techniques. Over Baugh (1990) in her study on the relationship of the physical environment to teachers' professionalism, revealed that physical environment or facilities affect teachers in their performance.

She mentioned further that the most significant environmental features which influence teachers' performance are classrooms, furniture and class equipment. Marianhi (1979) commented that a simply, dignified, artistic exterior is suggestive of the purpose for which school building exists, make the scholars proud of their school and; will have an notable influence on their performance at school.

Newton (1997) profess the magnitude of instructional resources as he noted that they make teaching more productive; give instruction a more scientific base; make teaching and learning even more personal; make instruction more powerful and direct; and finally make achievement of objectives and goals easier. Oni (1995) asserts that availability in quality and quantity of suitable material, physical resources, in good supply, are crucial for the attainment of curriculum objectives. Adeogun (1999) advises that proper planning should be done on school facilities.

He affirmed that there is a straight bearing between variety of resources (physical and material) and learning outcomes. Sufficient and qualitative facilities are required for an effective learning and teaching to take in UBE schools. While Sureiman (2010) in his study found that school plants and availability of teaching prerequisite have important effect on academic performance of secondary school pupils in Kenya.

Modern school setting stresses on the provision of facilities such as adequate and spacious classrooms, workshop, laboratories, computers, good water source/supply, toilet facilities, functional libraries and transportation and communication system, among others. All these facilities and equipment are required in appropriate quality and quantity (Ajayi, 2001) Olutola (1998) study on educational facilities and student performance in Junior School Certificate Examination using Kwara State schools.

He discovered that schools adequately provided with the school plants and are higher in their rate of utilization scored higher in their performance in Junior School Certificate Examination subjects. A report of the African Regional Studies programme of the World Bank presents a sorry picture of the conditions in African Primary Schools, Nigeria Inclusive.

It points out that most schools in sub-Sahara Africa suffer from very poor condition of learning in dilapidated or half-completed buildings, inadequate desks, overcrowded classrooms, insufficient learning materials, inadequately educated and poor motivated teachers and the use of recitation as the dominant medium for learning (World Bank, 1998).

It was also noticed that in Nigeria, the total enrolment as a percentage of total school

age population had been decreasing since 1983 from 93% in that year till date (Chinsman, 1998 cited in Adeyemi, 2007). Rivers State which is the case study for this research work might not be entirely absolved from this apparent situation and decline in enrolment.

In Edo State Education Handbook, it was pointed out that the state strived to provide facilities and other instructional\* materials and equipment for the utilization of primary schools. In spite of these efforts, Ajayi (2001) felt seriously concerned that as much as total of 278,854 classrooms (1999/2000 session) in our schools were dilapidated.

He also notes that the obvious insufficiency of this number had amounted in severe overcrowding with pupils sitting on bare floor. This state of affairs has been identified by researchers to be of enormous influence on the interest of teacher in the teaching - learning process hence, its effect on teacher populations in schools today.

Ejiogu (1980), NPEC/World Bank (1997), AbdulKareern (2000) and Adeyemi (2007) in their various studies reports how Nigerian educational sector is constantly loosing much of its personnel to other sectors of the economy due to the state of the facilities in system. The dictum that "teaching is indivisible from learning but learning is not divisible from teaching" is that teachers do the teaching to make the students learn, but students can learn without the teachers. According to Akande (1985), learning can take place through one's interaction with one's environment.

Environment here refers to facilities that are available to enhance students learning result. It includes audio-visual, books, software and hardware of educational technology; so also, size of classroom, arrangement, sitting position and availability of tables, chairs, chalkboards, shelves on which instruments for practical are arranged (Farrant, 1991 and Farombi, 1998).

According to Oni (1992), facilities constitute a strategic factor in organizational functioning. This is so because they determine to a very large extent the smooth running of any social organization or system including education. He further noted that their availability, sufficiency and significance influence efficiency and high output.

The quality of infrastructure and learning environment has strong influence on the academic standard which is a key to quality assurance in the school. For instance, Earthman (2002), reporting on California, reveals that comfortable classroom temperature and smaller classes improve teachers' effectiveness and give opportunities for students to obtain more individual attention, ask more questions, participate more fully in discussions, decrease discipline problems and perform better than students in

schools with low quality buildings by several percentage points.

According to Yusuf and Akinniranye (2011), the organizational difficulties of the timetabling often make it difficult for schools to attain utilization rate of over 75%, hence 75% was considered adequate. The school climate is determined by the resources especially classroom under which the teachers and the students operate which influence teaching -learning process.

Uwheraka (2005) reveals that facilities below approved standard could lead to decline in quality of teaching and learning in school resulting to poor students' academic performance. According to Olugbenga (1997), the level of resources available to any educational system and the way they are put to use will determine to a great extent the performance of that system.

In his words, Farombi (1998) opined that the prosperity of a nation or society could decide the quality of education in that land; explaining in details that a society that is prosperous will set up good schools with quality teachers, learning infrastructures that with such, students may learn with ease thus bringing about good academic achievement. The net effect of this is increased general academic performance of the whole students.

In his study on resource concentration, utilization and management as correlates of students learning outcomes in Abia State, Farombi (1998) found that the classroom learning environment in some schools was poor. According to Nigerian Tribune on Thursday 25 November 1999, in caption; Mass Failure will Continue until..." the chairman of the National Committee of WAEC, Dr. U.B Ahmed opined that the classroom is the beginning of failure...

a close look at the public schools and what goes on there shows that nothing good can come out of most schools as they do not have facilities, sufficient and suitable human resources to train candidates for Certificate Examinations. The statement indicates that the problem of candidates' massive failure in Certificate organized examination will go on until the situation of the nation's public schools change for the better.

Writing on how to improve junior secondary and primary school education in developing countries, World Bank publication (1990), citing Mwamwenda and Mwamwenda (1987) linked performance of students to the provision of adequate facilities while referring to a study of 51 junior secondary and primary schools in Botswana that students performed extensively better on academic tests when they had sufficient classrooms, desks and books.

Earlier, Fagbamrye (1979) attesting to why students' performance standard fall observed 559 cases from 13 secondary schools in Lagos State using age, type of school (Day or Boarding, mixed or single sex), teachers qualification and teaching experience as well as intake quality using students' entrance examination achievement. His findings discovered that schools which are equipped had good records of attainment and attracted more students.

He concluded that good quality schools in terms of resources / facilities and younger students' intake do better in Certificate Examinations. Writing on the deplorable state of UBE schools in Nigeria, Ogunmoyela (1994) lamented that school buildings of UBE schools have no roof, windows and doors, some walls are cracked, instructional facilities are lacking while teachers are frustrated consequent upon lack of equipment/facilities to meet educational endeavors.

Comparing schools in developing countries with what obtains in industrialized world, in terms of facilities, materials, utilization, and provision. Akintayo (1997) opined that schooling in developing countries like Nigeria takes place under condition that are very different from those in industrialized countries like Great Britain.

He further noted that primary school pupils in developed countries are likely to go to school in modern well-equipped buildings and to have a curriculum that is well thought out) in terms of scope and sequence. In line with the, Lockheed and Verspoor (1991) stated that on the average they receive 900 hours a year of learning time.

The situation is not the same in Nigeria, both primary and junior secondary schools in Nigeria in particularly Cross-Rivers State battle with dilapidated buildings and incessant strike action for upward of three to six months that students' average attendance per session is very poor and discouraging, (Adeogun, 2006).

#### **Physical Resources Utilization**

In terms of educational resources, it could refer to the level or degree of available resources that are put to use. It is one thing for facilities to be adequately provided; it is another thing for such facilities to be effectively utilized. For example, Okunamiri (2003) found out that whereas facilities were adequately provided in selected schools in Imo State, these facilities there not effectively utilized.

Olagboye (2004), viewed use of school infrastructure and learning environment as the degree of usage of school buildings, laboratories, library, assembly-ground, flower garden, school garden, volley-ball field, chairs, desks, chalkboard, and so on.

Nevertheless, too much pressure on their use could amount in over utilization, a condition that could result to speedy deterioration and breakdown.

For instance, when a classroom built to accommodate 40 students is constantly being used for 60 students then the returns from these facilities may not be maximized in terms of teaching and learning. Comfortable learning facilities will not only boost the morale of teachers and students but will also ensure the attainment of the set educational goals in junior secondary and primary schools.

The educational policy makers and investors should not stop at the suitable provision of physical resources and its maintenance but should also use them optimally for the accomplishment of the set educational objectives. Oyedeji (1998) clearly states that apart from protecting pupils and teachers from the sun, the rain, the heat and cold, the school buildings represent a learning environment which has a tremendous positive effect on the comfort, safety and student academic performance.

Physical resources can either be optimally utilized, under or over utilized. It is neither wise to under-utilize school resources in that the extra or unused ones lie fallow and will in no distant time, be in a state of deterioration. Hence, it leads to waste of huge financial investment.

While over utilization also leads to quick deterioration as well and in case of buildings over-crowding may make them to totter and eventually collapse. And if spoilt or damaged items are not quickly replaced, the system would gradually grind to a halt. Therefore, the best practice is to use available resources to meet the required standard optimally.

Ayodele et al (2007) who stated that in southwest geo-political zone, Nigeria public schools, and classroom facilities were grossly under-utilized. Over-utilization of physical facilities according to Oyedeji (2000), leads to over-crowding quick deterioration and eventually collapse. Over utilization of facilities also indicates inadequacy. Fafunwa (1990) statement that Nigerian schools are facing an acute shortage of laboratory and equipment.

In general, the result reveals a severe lack of physical asserts (facilities) as shortages leads to over utilization. Adeyemi and Adu (2010) in their study titled "Enrolment Analysis and the Availability of Physical Facilities for the Universal Basic Education (UBE) Programme in Ekiti State, Nigeria.

They reported a severe scarcity of physical asserts (facilities) in the schools and this

shows that the schools were not ready for the UBE programme. Musau (2004) looked at best utilization of resources in schools in Kisumu district, Kenya, The study discovered that only a few school in the district had above five laboratory rooms (19.35%) since no school can provide adequate teaching service without the use of laboratory, she concluded that lack of laboratory facilities was a major contribution to poor performance of students in Kisumu district as clearly indicated from the result of the study, there is over-utilization of chemistry, physics and biology laboratories as a result of inadequacy, over-stretch of available physical space and facilities due to overenrolment and inadequacy can lead to quick deterioration and consequently nonachievement of educational goals and objectives.

# **Measures of Physical Resources Utilization**

The necessity of measuring plant utilization is to determine the degree or level to which institutions are using their physical plant productively. This is because the information derived comprises one of the criteria employed in assessing capital outlay by requests such as recruitment of personnel, construction of buildings/structures, classrooms, procuring more equipment, provision of more fund, enrolment in terms of number of student to be admitted. Tijani (2011) posited that the use of physical resources could be measured through the following:

- 1. Time Utilization Rate (TUR)
- 2. Space Utilization Rate (SUR)
- 3. Global Utilization Rate (GUR)

**Time Utilization Rate**: This is the measure of the effective teaching hours over the official hours to which a classroom is used.

Ibitoye (2008) added that time utilization rate of resources is the proportion of putting a classroom or building to use. It is calculated by dividing the actual number of hours or period a classroom is put to use each week by the weekly theoretical number of hours of use multiplied by 100%.

 $TUR = \frac{Actual Hours}{Theoretical} \times \frac{100}{1}$ 

**Space Utilization Rate**: The space utilization rate gives a comparison of average size of the Pupils occupying a classroom with its theoretical capacity occupied by a section of student with the room's theoretical size. Space utilization rate is mathematically represented as:

 $\frac{\text{Average Number of students Attending}}{\text{SUR} = \text{Theoretical Size (Space Available in Classroom)}} \times \frac{100}{1}$ 

According to Tijani (2011), the University of California adopted the legislative approved utilization standards.

The legally established standards for use of instructional facilities (classrooms and teaching laboratories for classrooms, the standard is for each station (such as desk in a classroom or a workplace in a teaching laboratory) to be occupied for instructional purposes 34 hours a week between the hours of 8:00a.m. and 2:00p.m, Monday through Friday. The standard for teaching laboratories is 20 hours a week between 8:00a.m. and 5: 00 p.m.

The actual utilization rate of classrooms is about 28 hours per week and the actual utilization rate of laboratory is 18 hours per week. This means University of California uses classrooms about 80 percent and teaching laboratories 90 percentage of the time needed by the legislative standard. Therefore, TUR = Actual time used per week x 100 divided by Approved time per week X 1

For both classrooms and teaching laboratories respectively:

Weekly hour of classroom utilization rate =  $\frac{28}{35} \times \frac{100}{1} = 80\%$ Weekly hour of teaching laboratories utilization rate =  $\frac{18}{20} \times \frac{100}{1} = 90\%$ 

This shows that this particular school met the legislative standard; therefore the classrooms and teaching laboratories are well utilized.

**Global Utilization Rate**: This is an all -embracing rate that comprises both time and space utilization.

Global utilization rate is the total utilization capacity of classroom, building or any facility. In doing this, a better consideration is given to both the actual and theoretical or conventional time and space utilization at the same time.

 $GUR = \frac{TUR \ x \ SUR}{100}$ 

# School Location and Human Resources Distribution

Anyaegbu, Christman, Jingpu, (2004) opined that rural education is the vital and key to rural development and an essential building block of national development; that to eradicate poverty, illiteracy must first be removed from the rural populace and increase their degree of knowledge.

Abidogun (2006) emphasized rural areas as having greater challenges concerning educational development than the urban centers, due to the peculiar socio-economic and institutional structures of the rural areas. Cometh, (2009) stated in her study on "Teachers Effectiveness" that teachers as indispensable human resources in the teaching and learning process should be adequately motivated and made comfortable n order to be better placed to teach students effectively and providing well-furnished office is one motivating factor.

Abidogun (2006) reported that many teachers therefore reject posting into rural areas while those that do, treat their presence in such areas as part time assignment. Edho (2009) said that some of the constraints that affect the success rates of the UBE programme in the rural communities is the teachers' inadequacy and their unwillingness to be posted to rural schools.

Certain factors affect the distribution of teachers in schools, these include: gender, social status, qualification, area of specialization, government policy, cultural and religious belief (Edho, 2009). It is a common practice that married female teachers serve in their husband's stations and these affect even distribution of teachers. Rural schools suffer more from this gender influence on teachers' distribution, since most married women serve in urban schools.

Parents complain of low / poor quality instruction especially in rural schools. Qualitative instruction resulting into qualitative education can only be attained through even distribution of available teachers (lkoya, 2008)."

#### School Location and Physical Resources Distribution

Aghenta (2001) lamented about the short supply of resources at all levels of the Nigerian educational system. While corroborating the above observation, Adeyoju and Araromi (1997:13) had equally observed that "there are many primary and secondary schools both in urban and rural areas where lessons are held under trees and buildings without roofs". Adeogun and Osifila (2008) revealed a very strong positive significant and reliable relationship between instructional resources and academic performance.

According to them school endowed with more resources performed better than schools that are less endowed. This corroborated the study of Babayomi (1999) that urban schools, because of the availability and adequacy of teaching and learning resources performed better than rural schools. Durosaro (1998) examined school plant planning in

relation to the administrative effectiveness of secondary schools in Oyo Township.

He used the factors of location of schools, utilization and maintenance as measures of schools results in Junior School Certificate Examinations, as the measure of schools effectiveness. He found that schools that are well-planned and maintained had higher student retention and is even more effective than others. It was concluded that adequate planning of school physical resources are fundamental to administrative effectiveness in secondary schools.

Other research findings have reported that even if the educational curriculum is sound and well operated while the school plant is poor, unutilized and badly managed, the result of the teaching and learning activities will be negative. Some researchers have postulated that the teachers and the pupils are certainly better influenced by the physical environment than they often realized.

Ayodele and Oyebanji (2007) in their study of Personnel and Physical Resource Utilization in southerner Nigerian Primary School, it revealed that out of 44 (forty-four) schools examined in urban areas and 10 (ten) in rural areas only 4 (four) have library facilities in urban while 1 in rural area. Bello et al, (2008) in their study "a survey of school libraries facilities and resources in Offa local government area of Kwara State.

They discovered that all the seventeen (17) secondary schools examined boast of one form of library or the other. Akinsanya (2008) reported that, the school library serves as the center of the intellectual life of the school available all times for reference, for study and for private reading. A school library supplements and improve work done in other subjects taught in the school.

Black etal (1998) who found in Uganda that science education is faced with the problem of lack of resources with half the schools having no real laboratory. This is also in accordance with Adeyemi (2008) in his study of Science Laboratory in Ondo State. He concluded that there was in- sufficient provision of science laboratories and equipment in many schools in Ondo State.

This also agreed with the findings made by Onipede (2003) that there were lack of science laboratory facilities in schools. Nwadiani (2003), He stated that in all levels of education in Nigeria, classrooms, equipment, furniture and other instructional materials are very inadequate to promote effective teaching and learning. The result is also in agreement with Agih (2012), Fadipe (2006), Jiboyewa (1981), and Okoh(1987).

They all reported that the entire educational system is replete with problems of

educational facilities to facilitate learning. Likoko, Mutsotso and Nasongo (2013) in their study "the sufficiency of instructional material, physical facilities and their effect on quality of teacher preparation in Bungoma county Kenya" reported that most schools had inadequate facilities like classroom(56.1% in adequate) hostels (34,9% in adequate) laboratories (43.1% not available).

However, the result of inadequacy disagreed with the earlier report of Yaqub (2005) which In Nigeria in general and Niger-Delta states in particular, junior secondary schools and primary schools are located in both urban and rural centers. Although these states are endowed with abundant natural resources like oil deposits and forest resources among others; they are however, poorly developed in terms of infrastructural facilities like good library, laboratory and social amenities particularly in the rural areas.

In support of this, the study conducted by Matthews, Carrl and Hudson (2001) on teaching in rural and remote areas in Australia revealed that some concerns may detract teaching graduates from working in rural locations in Australia. This aptly summarized the precarious situation in rural areas in Niger- Delta states of Nigeria, devoid of basic social amenities.

In his words, Ojoawo (1990), however, stated that certain schools are privileged in the allocation of facilities at the detriment of others. London (1993) stated that in many developing nations certain physical facilities are non-existent, that those examples where amenities (facilities) are available many of them are of sub-standard quality.

What is even more alarming is the correlation, which these observers assert to exist between quality of facilities and academic performance. Lamenting on the inadequacies of school plants (facilities) in educational industry, Akinkugbe (1994) noted that everywhere you look, primary, secondary, special technical, tertiary, there is plentiful evidence of crippling inertia, criminal neglect and a persistent decay in values and standard.

#### Appraisal of Reviewed Literature

The study is on the availability and utilization of resources in UBE institutions in the Niger-Delta Region. Therefore, this chapter reviewed the theoretical framework, evolution of universal education in Nigeria, Universal Basic Education: Its Nature, Objectives and Features in Nigeria, Concept and Type of Educational Resources, Physical Resources, Concept of Human Resources Management, Availability of Human Resource in UBE schools, Teachers Qualifications in UBE schools, Teacher's Years of Experience in UBE schools, Teacher's Utilization (Teacher-Pupils Ratio) in UBE schools, Availability of Physical/Material Resources in UBE schools, Physical Resources Utilization, School

Location and Human Resources Distribution, and School Location and Physical Resources Distribution.

The study based its theoretical framework on the 'System Resource Theory of Organizational Effectiveness' propounded by Ephraim Yuchtman and Stanley Seashore in (1967). The theory emphasized the significance and purpose of resources to organization's continual operation and survival, and that schools cannot survive without resources as there would be no students, if schools cannot survive due to short of resources; he therefore postulated that the perceptions of resources dependency by policy makers and school administrators should clearly play enormous part in their reactions in making rules and appropriating funds for specific educational programmes.

The review showed that for quality education to be maintained and for the sake of equity in the degree of educational delivery, a thorough manpower planning through adequate teachers supply and their effective utilization by way of maintaining equilibrium in the demand and supply of teachers must be periodically carried out in order to improve a better educational achievement.

The changing nature of our school system called for constant and periodic review of the whole educational system through evaluation of demand and supply of school resources that is human and physical resources. It could be maintained that ineffectiveness in school system is as a result of inefficient utilization of the school resources.

The review revealed that among the greatest basic need of any education policy is the school physical resources which include; building, grounds, equipment, material, utilities and environmental safety. Researchers were of the opinion that the best way of determining utilization rate of school building is by calculating the Space Utilization Rate (SUR), Time Utilization Rate (TUR) and Global Utilization Ratio (GUR).

Teacher's utilization rate can also be measured by using the student-teachers ratio or the number of periods handled by a teacher per week (teacher's workload). Finally, many studies reviewed focused mainly on resources accessibility and utilization in UBE schools. Effort has not been made to empirically investigate the state of human and physical resources availability and utilization in UBE institutions in the Niger-Delta Region of Nigeria. This is the knowledge gap which this study intends to fill.

# CHAPTER THREE RESEARCH METHOD AND PROCEDURE

This chapter is concerned with the procedures employed in the conduct of this research work. It focuses on research design, population 'of the study, sample and sampling technique research instrument, validity, and reliability of the instrument, method of data collection and method of data analysis.

## **Research Design**

The study adopted an *Ex-post facto* research design and it was descriptive in nature. Consequently, no independent variable was manipulated. This design was found appropriate because it studied the availability and utilization of physical and human resources in upper and lower Basic institutions as they were, thus there was no manipulation of variables.

# **Population of the Study**

The target population of this study was all the ten thousand nine hundred and eighty (10,980) UBE institutions which consist of eight thousand five hundred and forty- three (8,543) primary schools and two thousand four hundred and thirty-seven (2,437) junior secondary schools in the Nine (9) states that constitute the Niger- Delta Region of Nigeria during the 2014/2015 academic session. The population of UBE institutions in the Niger-Delta Region is represented in Table 3.1:

#### Table 3.1: Population of UBE institutions in the Niger- Delta Region of Nigeria
S/N	STATE	NO. OF UI	BE SCHOOLS	TOTAL
		Primary	Junior secondary	
1	Delta	1277	426	1703
2	Bayelsa	415	150	565
3	Rivers	840	230	1070
4	Edo	1009	396	1405
5	Abia	628	210	838
6	Akwa-Ibom	1155	214	1369
7	Cross - Rivers	1023	245	1268
8	Imo	1275	310	1585
9	Ondo	921	256	1177
ТОТ	AL	8,543	2,437	10,980

Source: Universal Basic Education Commission (UBEC), Abuja as at October, 2014.

### Sample and Sampling Technique

The researcher sampled three thousand six hundred and fifty (3,650) UBE institutions in four states out of the Nine (9) states that constitute the Niger- Delta Region through the stratified random sampling and multi-stage sampling techniques to select (10%) of the total number of schools available in each of the sampled states. This depict that a total of thirty – six (36) UBE institutions which consisted of twenty – seven (27) primary and nine (9) junior secondary schools were used for the study. This is shown in Table 3.2:

### Table 2: Distribution of UBE institutions in the Sampled States of the Study

STATE	TOT SC AV	AL N CHOO AILA	O. OF DLS ABLE		SAMPLING T			CECHNIQUES			ATI	SAMPLED STAFFS, STUDENTS & PUPILS POPULATION			
				Stra (10%	tified %)	I	Mu (109	lti-sta %)	ige			5	ç staff	TOT AL	upils
	ry	Sec.	TOT AL	ry	Sec.	TOT AL	ry	Sec.	TOT AL			ng staf	eaching		its & pi
	Primaı	Junior		Primaı	Junior		Primaı	Junior		Rural	Urban	Teachi	Non- to		Studen
ONDO	921	25 6	1177	92	26	118	9	3	12	6	6	114 9	33 0	1479	1841 7
BAYEL SA	415	15 0	565	41	15	56	4	2	6	3	3	349	15 6	505	7222
ABIA	628	21 0	838	63	21	84	6	2	8	4	4	496	20 4	700	9660
RIVERS	840	23 0	1070	84	23	107	8	2	10	5	5	554	22 8	782	1403 9
TOTAL	280 4	84 6	3650	28 0	85	365	27	9	36	18	18	254 8	91 8	3466	4933 8

Source: Universal Basic Education Commission (UBEC), Abuja as at October, 2014.

**Research Instrument** 

The instrument used for this study was the Researcher's self-designed checklist on "availability and utilization of resources in UBE institutions. Section 'A' focused on demographic variables, such as name of the school, location, type of school, number of teaching and non-teaching staff in the school. Section 'B' was on Human resource availability and utilization, while Section 'C' was on Physical resource availability, adequacy and utilization.

### Validity of the Instrument

In relation to content validity, the drafted checklist was shown to researcher's supervisors, and other specialists in educational management, who helped in the validation of the instruments. Their comments and corrections were considered in the final draft of the instruments, which at the end ensured its content validity.

### **Reliability of the Instrument**

The reliability of the instrument indicates how consistently the instrument gives the same result on the administration of the instrument for the second time. The study is an *Ex-Post Facto* research design, that involved examination of existing records which were non-manipulative in nature with the use of checklist and therefore, there is no need for reliability test.

### **Method of Data Collection**

The researcher visited and administered the copies of the checklist to the sampled UBE institutions through the permission and assistance of the school head (i.e. Principal and Headmaster) or their assistants.

### Method of Data Analysis

The data collected were organized, tabulated and analyzed using percentages, bar-charts and chi-square statistics at 0.05 level of significance. To determine the utilization of teachers; Full-time teachers' equivalent was calculated. The number of periods allocated for each subject was calculated from the school time table for each school. The total period for each subject was divided by the numbers of teachers to determine the average weekly periods of teachers. This was calculated for each subject on the school time table for each school. In determining the FTE, the total number of periods for all the subjects offered in the school was divided by the maximum national recommended periods per week.

F.T.E = Total Number of Periods per week, divided by the National Recommended teaching periods of one teacher.

To calculate the Full- Time Equivalent Teachers-Students' Ratio, the total number of students in each school was divided by the Full Time Teachers' Equivalent

FESTR = <u>numbers of students</u> FTE

This was to determine the ratio of teachers to students/pupils. This method gives in-depth information on the over or under-utilization of teachers within the schools system.

For physical resources adequacy, the numbers of facilities available was deducted from the numbers needed. The short fall was determined. The level of adequacy was determined by calculating the percentage of the available facility, and 75% and above was considered adequate (Adeyemi, 2004).

Adequacy= <u>Numbers of available facility</u> × <u>100</u> Numbers needed 1

 $\leq 75 =$  Inadequate

 $\geq$ 75 = Adequate.

In determining the No. of facilities Needed, the National Clearinghouse for Educational Facilities (NCEF) operational guideline for educational facilities which was conceived by UNESCO (2000) as to the minimun No. of each facility type for UBE institutions was used. The guideline stipulates the approved standard required of each facility type in UBE institutions. (Kolowich, 2011 Adeyemi, 2004). This was used in determining the No. of facilities Needed in the sampled schools used for the study.

For utilization of physical facilities, Time utilization (TUR), Space utilization rate (SUR) and Global utilization rate (GUR) was determined. Time utilization rate was determined by dividing the numbers of hours spent in the school by the numbers of hours the facility is available for use

TUR= Actual hours× 100Theoretical hour1

Space utilization rate was calculated by dividing the average numbers of students in the class by the theoretical size (space available)

$$\frac{\text{Average Number of students Attending}}{\text{SUR} = \text{Theoretical Size (Space Available in Classroom)}} \times \frac{100}{1}$$

Global utilization rate was calculated by multiplying the TUR by the SUR and divided by 100.

Therefore 
$$GUR = SUR \times TUR$$
  
100

The GUR was used to determine the utilization rate of the physical facilities. Any value lower than 75% was considered under-utilized, above 75% was optimally utilized while above 100% was considered over- utilized.

### **CHAPTER FOUR**

### PRESENTATION OF RESULTS AND DISCUSSION

This chapter deals with logical presentation of results and discussion on the availability and utilization of resources in Universal Basic Education institutions in the Niger- Delta Region of Nigeria according to research questions and hypotheses.

### **Presentation of Results**

Research Question 1:

What is the state of human resources availability in UBE institutions in the Niger - Delta Region of Nigeria?

In answering this question, data on the teaching and non- teaching staff available in the sampled UBE institutions were collected through the checklist. In calculating the state of human resources availability, the percentages of teaching staff (N.T) and non- teaching staff (N.T.S) available in each school was computed by multiplying each unit scores ( i.e N.T and N.T.S) by 100 and divided by the total units scores of each school. (Akinwumiju, 2003)

	S/N	Name of Institutions	aff	%	5 U	%	Total
e			Sta	T.S	f S)	(N.T.S)	
stat			T.S		rea Staf		
			ach (				
			Te		Ž		
	1	Adetola Primary School, Akure	103	74	37	26	140
	2	L.A Pry School, Ikare-Akoko	95	76	30	24	125
	3	Ajimba Model Pry School, Ekeogba	99	78	28	22	127
	4	Christ Central Pry. Sch., Iyire-Owo	97	76	31	24	128
	5	Govt. Pry. School, Owo	90	76	29	24	119
ĕ	6	Igbatoro Pry School, Igbatoro	60	76	19	24	79
Z	7	Pearly Gate School, Ore	56	80	14	20	70
-	8	Erinje gram. Sch., Odo-Erinje	57	74	20	26	77
	9	Ipe PrimarSy School, Ipe	82	82	18	18	100
	10	Lydia Memorial Pry Sch., Ilotin	93	82	21	18	114
	11	Fiwasaye Girls' G/S., Akure	152	80	39	20	191
	12	Federal Govt Girls' College, Akure	165	79	44	21	209
	13	Kaiama Gram. Sch., kaiama	45	68	21	32	66
A S	14	Federal Govt. College, Odi	68	67	34	33	102
E E	15	Agudama Pry Sch., Yenagoa	56	67	28	33	84
X	16	Opolo Pry School, Yenagoa	61	71	25	29	86
BA	17	Universal Basic Sch., kolo-Ogbia	56	74	20	26	76
	18	Biogbolo Pry Sch., Yenagoa	63	69	28	31	91
	19	Federal Govt. College, Umuahia	105	69	48	31	153
	20	Igbo National High Sch., Aba	72	68	34	32	106
	21	Amaokayi Community Pry Sch., Amaokayi -	55	75	18	25	73
4		Ugwueke					
BL	22	Enuda Pry Sch., Abiriba	48	71	20	29	68
A	23	Azikwe Pry Sch., Aba	60	70	26	30	86
	24	Aba Pry Sch., Aba	58	72	23	28	81
	25	Community Pry Sch., Ohabel	50	72	19	28	69
	26	Abayi- Umuocham Pry Sch., Abayi	48	75	16	25	64
	27	Birabi Memorial Gram. Sch., Bori	57	73	21	27	78
	28	Govt. Sec. Sch., Akabuka	49	72	19	28	68
	29	Portharcout Pry Sch., Portharcout	68	67	33	33	101
s a	30	Pabod Model Pry Sch., Portharcout	64	72	25	28	89
E S	31	Airforce Pry Sch., Obio- Akpor	59	71	24	29	83
Ξ	32	Bori Pry Sch., Bori	54	73	20	27	74
	33	Excel Model Pry Sch., Okrika	51	74	18	26	69
	34	Dominion Pry Sch., Elimgbu	48	71	20	29	68
	35	Eleme Pry Sch., Eleme	50	66	26	34	76
	36	Baptist Pry Sch., Emuoha	54	71	22	29	76
	I	TOTAL	2,548	74%	918	26%	3,466

Table 3: Analysis of Human Resources availability in UBE institutions

Source: Field-work, 2015

Table 3: shows the human resources status in the sampled UBE institutions in the Niger-Delta Region of Nigeria. It reveals that there were 2548 teaching staff and 918 nonteaching staff. In general, the table revealed that 74% of human resources in the UBE institutions were teaching staff and 26% were non-teaching staff. In all the institutions examined, the teaching staff was more than the non-teaching staff. The implication of this result is that for the sampled schools, there are sufficient teachers.



Figure 2: Bar-chart Showing Human Resources Availability in UBE institutions

Research Question 2: What is the distribution pattern of teachers by qualifications in UBE institutions in the Niger- Delta Region of Nigeria?

	Μ	F	Ν	%	Η	%	BS	%	B.A	%	B.	%	В.	%	М.	%	Ph.	%	ТО
H			C		N		<b>C</b> /		/		Α		SC		ED		D.		TAL
			E		D		PG		PG		(E		(E						
							DE		DE		D)		<b>D</b> )						
1	39	64	13	12	4	3.	10	9.	20	19	28	27	16	15	11	10	1	0.	103
				.6		8		7		.4		.1		.5		.6		9	
2	30	65	7	7.	6	6.	29	30	7	7.	19	20	14	14	13	13	-	-	95
				4		3		.5		4				.7		.6			
3	57	42	5	5	4	4	24	24	13	13	16	16	22	22	13	13	2	2.	`99
								.2		.1		.1		.2		.1		02	
4	36	61	7	7.	4	4	41	42	12	12	9	9.	10	10	14	14	-	-	97
				2				.2		.3		3		.3		.4			
5	38	52	10	11	4	4.	17	18	6	6.	17	18	19	21	16	17	1	1.	90
				.1		4		.8		6		.8		.1		.7		1	
6	26	34	6	10	4	6.	10	16	16	26	10	16	9	15	5	8.	-	-	60
						6		.6		.6		.6				3			
7	35	21	5	8.	1	1.	13	23	9	16	10	17	15	26	3	5.	-	-	56
				9		7						.8		.7		3			
8	23	34	12	21	5	8.	17	29	8	14	8	14	5	8.	1	1.	1	1.	57
						7		.8						7		7		7	
9	37	45	4	5	2	2.	9	11	19	23	24	29	17	21	5	6.	2	2.	82
						4										1		4	
10	37	56	10	11	5	5.	24	25	10	10	18	19	18	19	7	7.	1	1	93
						4		.8		.8		.4		.4		5			
11	52	10	3	2	7	4.	23	15	22	14	16	10	40	26	38	25	3	2	152
		0				6				.5		.5							
12	71	94	2	1.	2	1.	10	6	16	10	45	27	30	18	59	36	1	0.	165
				2		2								.2				6	
13	25	20	6	13	4	8.	8	17	12	26	6	13	7	15	2	4.	-	-	45
				.3		8				.6		.3		.5		4			
14	22	46	4	5.	3	4.	15	22	10	14	14	20	8	11	14	20	-	-	68
				8		4				.7				.7					
15	26	30	7	12	2	3.	13	23	8	14	12	24	10	17	3	5.	1	1.	56
						5								.8		3		7	
16	22	39	12	20	1	1.	10	16	12	20	7	11	11	18	6	9.	2	3.	61
						6						.4				8		2	
17	28	28	9	16	-	-	20	35	8	14	9	16	8	14	2	4	-	-	56
								.7		.3				.3					
18	19	44	6	9.	6	9.	12	19	9	14	14	22	11	17	5	8	-	-	63
				5		5				.2		.2		.4					

Table 4: Distributions of Teachers by Qualifications

20     39     33     6     8.     3     4.     15     21     10     14     24     33     8     11     5     6.     1     1.       3     2     2     2     3     3     2     3     3     9     3	72 55 48
	55 48
	55 48
21   14   41   5   9   4   7.   13   24   10   18   12   21   8   14   3   5.   -	48
	48
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
	(0)
$\begin{bmatrix} 23 & 12 & 48 & 6 & 10 & 8 & 13 & 14 & 23 & 15 & 25 & 8 & 13 & 7 & 11 & 2 & 3. & - & - \\ 23 & 23 & 23 & 23 & 23 & 23 & 23 & 23$	60
24 23 35 17 29 3 5 8 13 11 18 8 13 9 15 2 3	58
	20
25 28 22 7 14 2 4 19 38 6 12 5 10 7 14 4 8	50
26 18 30 8 16 2 4. 12 25 8 16 10 21 8 16	48
.6 2 .6 .6	
27 34 23 7 12 3 5 18 31 9 15 7 12 10 18 2 3. 1 1.	57
	40
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	49
	68
$\begin{bmatrix} 29 & 27 & 41 & 0 & 9 & 8 & 11 & 14 & 20 & 10 & 14 & 12 & 17 & 13 & 19 & 4 & 3. & 1 & 1. \\ & & & & & & & & & & & & & & & & & & $	08
30         36         28         8         12         4         6.         12         19         15         23         11         17         1         17         2         3.         1         1.	64
.5 3 .4 .2 .2 1 5	
31 27 32 6 10 5 8. 16 27 10 16 9 15 13 22	59
	5.4
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	54
33         27         24         8         16         5         9         9         17         8         16         10         19         8         16         3         5         7         7	51
	51
34 21 27 4 8. 2 4. 11 22 6 13 15 31 9 18 1 2	48
35 19 31 7 14 12 24 8 16 11 22 9 18 2 4 1 2	50
36     23     31     9     16     -     -     10     18     10     18     11     20     13     24     -     -     1     1.	54
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2548
IAL         8/         01         4         5         4         4         4           9/         43         57         10         5         21         15         19         17         10         00	
$ \begin{vmatrix} 70 & 43 & 57 & 10. \\ 7 & 7 & 7 & 5 & -21. \\ 7 & 5 & -5 & 9 & 2 \\ 7 & 7 & 5 & -5 & 9 \\ 7 & 7 & 7 & 7 & 7 \\ 7 & 7 & 7 & 7 & 7$	

Source: Field-work, 2015

Table 4: shows the distribution of teachers by qualification in UBE institutions in the Niger- Delta Region of Nigeria. Out of 2548 teachers, 274 are with NCE representing (10.7%), 123 has HND representing 5(%), 550 B.Sc./PGDE representing (21.5%), 407

has B.A/PGDE representing (15.9%), 464 (18.2%) has B.A (Ed), 454 (17.8%) has B.Sc. (Ed), while 252 (10%) and 24 (0.9%) has M.Ed. and Ph.D. respectively. The result reveals that majority of the teachers in UBE institutions have teaching qualifications as only 5% have HND.



Figure 3: Bar-chart showing Teachers' Qualifications in UBE institutions

Research Question 3: What is the teachers' years of experience in UBE institutions in the Niger- Delta Region of Nigeria?

SC	LOCATI	NO. OF	%		TEA	<b>ACH</b>	ERS	YEA	ARS C	)F E	XPEI	RIENCE	
Н.	ON	TEACH		1-	%	6-	%	11	%	16	%	ABO	%
		ERS		5		10		-		-		VE	
								15		20		20	
1	Urban	103	4	6	6	26	25.	28	27.	23	22.	20	19.
							2		1		3		4
2	Urban	95	3.	2	2.1	21	22.	21	22.	35	37	16	17
			7				1		1				
3	Rural	99	3.	3	3	37	36.	24	23.	14	13.	21	21.
			8				6		8		9		2
4	Rural	97	3.	3	3	8	8.2	22	22.	40	41.	24	24.
			8				5		7		2		7
5	Urban	90	3.	13	14.	21	23.	19	21	22	24.	15	16.
			5		4		3				4		7
6	Rural	60	2.	2	3.3	16	26.	24	40	10	16.	8	13.
			3				7				7		3
7	Urban	56	2.	2	3.6	8	14.	20	35.	20	35.	6	10.
			1				3		7		7		7
8	Rural	57	2.	4	7	11	19.	17	29.	15	26.	10	17.
			2				3		8		3		5
9	Rural	82	3.	3	3.7	14	17.	26	31.	22	26.	17	20.
			2				1		7		8		7
10	Rural	93	3.	4	4.3	30	32.	18	19.	22	23.	19	20.
			6				3		4		7		4
11	Urban	152	5.	7	4.6	7	4.6	30	19.	72	47.	36	23.
			9						7		4		7
12	Urban	165	6.	7	4.2	4	2.4	20	12.	81	49	53	32.
			4						1				1
13	Rural	45	1.	4	8.8	18	40	8	17.	9	20	6	13.
			7						7				3
14	Rural	68	2.	6	8.8	15	22.	24	35.	10	14.	13	19.
			6				1		2		7		1
15	Urban	56	`2.	7	12.	14	25	20	35.	10	17.	5	8.9
			1		5				7		8		
16	Urban	61	2.	2	3.2	18	29.	11	18.	17	27.	13	21.
			3				5		03		8		3
17	Rural	56	2.	4	7.1	13	23.	20	35.	14	25	5	8.9

**Table 5: Showing Teachers Years of Experience** 

			1				2		7				
18	Urban	63	2.	6	9.5	11	17.	19	30.	21	33.	6	9.5
			4				4		1		3		
19	Urban	105	4.	10	9.5	23	21.	18	17.	30	28.	24	22.
			1				9		1		5		8
20	Urban	72	2.	2	2.7	15	20.	21	29.	26	36.	8	11.
			8				8		1		1		1
21	Rural	55	2.	5	9.1	10	18.	22	40	12	21.	6	10.
			1				1				8		9
22	Urban	48	2	8	16.	14	29.	12	25	7	14.	7	14.
					6		1				5		5
23	Rural	60	2.	6	10	11	18.	13	21.	18	30	12	20
			3		6.0		3	10	6	1 -	•		10
24	Rural	58	2.	4	6.8	8	13.	18	31.	17	29.	11	18.
- 25	TT 1	50	2	2		10		10	03	10	3	0	9
25	Urban	50		3	6	13	26	16	32	10	20	8	16
26	Dural	4.0	9	2	()	14	20	10	20	10	25	0	10
20	Kurai	48	I.   0	3	0.2	14	29.	10	20. o	12	23	9	18.
27	Urbon	57	0	6	10	11	10	21	0 26	11	10	Q	1/
	Orban	57	$\begin{array}{c} 2.\\ 2\end{array}$	0	10. 5	11	19.	21	30. 8	11	19.	0	03
28	Rural	49	1	Δ	81	13	$\frac{2}{26}$	18	36	9	18	5	10
20	Ruiai		9		0.1	15	5	10	7		3	5	2
29	Urban	68	3	5	73	14	21	23	33	18	26	8	11
	- Crown				,				8		4	Ũ	7
30	Urban	64	3	6	9.4	24	37.	15	23.	13	20.	6	9.4
							5		4		3		
31	Urban	59	2.	4	6.7	12	20.	17	28.	16	27.	10	16.
			3				3		8		1		9
32	Urban	54	2.	3	5.5	18	33.	11	20.	13	24.	9	16.
			1				3		3		1		6
33	Rural	51	2	5	9.8	17	33.	15	29.	8	15.	6	11.
							3		4		6		7
34	Rural	48	2	4	8.3	12	25	9	18.	15	31.	8	16.
									7		2		6
35	Rural	50	2	2	4	16	32	17	34	12	24	3	6
36	Rural	54	2.	6	11.	20	37	14	25.	8	14.	6	11.
			1		1				9		8		1
	Total	2548	10	20	8.1	55	21.	66	25.	67	26.	446	17.
			U	7		7	8	1	9	7	5		6

Source: Field-work, 2015

Table 5: shows that 207 teachers (8.1%) of the 2548 teachers fall into the category of 1-5 years of teaching experience, 557 teachers (21.8%) have between 6-10 years of teaching experience, 661 (25.9%) have between 11-15 years while 677 (26.5%) have 16-20 years of teaching experience and 446 teachers (17.6%) have above 20 years of teaching experience. The analysis revealed that (44.3%) of the teachers in UBE institutions in the Niger-Delta Region are in rural schools while (55.6%) are in urban schools.



Figure 4: Bar-chart showing Teachers' Years of Experience in UBE institutions

## **Research Question 4: What are the average weekly periods of teachers in UBE institutions in the Niger- Delta Region of Nigeria?**

In response to this question, data on the various subjects offered in UBE schools in the Niger –Delta Region were collected through the checklist. Data on the number of periods assign weekly to the various subject teachers in the schools were also collected. Average weekly periods is the number of periods taught by a teacher per week in a school. It is computed by dividing the total number of periods in a school by the number of subjects offered in the school (Adeyemi, 2004).

S/N	SUBJECTS	NO. OF PERIODS	WEEKLY
1	English Language	28	Weekly
2	Mathematics/Arithmetic	29	Weekly
3	Basic science	25	Weekly
4	Agricultural science	18	Weekly
5	Christian Religious Studies	12	Weekly
6	Civic Education	24	Weekly
7	Basic Technology	23	Weekly
8	Social Studies	22	Weekly
9	Computer Science	26	Weekly
10	Home Economics	17	Weekly
11	French	24	Weekly
12	Cultural & Creative Art (CCA)	20	Weekly
13	Physical & Health Education	18	Weekly
14	Business Studies	16	Weekly
	TOTAL	302	Weekly
	Average Weekly	Periods = 21	

Table 6: Average Weekly Periods of Teachers in UBE institutions

Source: Field-work, 2015

Findings from table 6, reveals that period allocation ranges from 29 to 15 with English Language and Mathematics having the highest number of periods of 28 and 29 respectively while teachers' teaching other subjects have lesser periods to teach with Christian Religious Studies and Business Studies having the lowest with 12 and 16

periods weekly. The table revealed that teachers were optimally-utilized. The average weekly periods of teachers in UBE institutions in the Niger- Delta Region of Nigeria is 21 periods per week.



Figure 5: Bar-chart showing Average weekly Periods allocation of Teachers in UBE institutions

# Research Question.5: What is the Full Time Equivalent Teacher- Students Ratio in UBE institutions (FTETSR)?

In computing the Full Time Equivalent Teacher- Students Ratio in UBE institutions (FTETSR), the Full-Time Teacher Equivalent (FTE) was first computed by summing up the total number of periods taught in the schools which was divided by the normal

teaching periods of one teacher (i.e national maximum teacher workload recommended) (Adeyemi, 2004). This is shown in the table 7a below:

# Table.7a: Full-Time Teacher Equivalent (FTE) in UBE institutions in the Niger-Delta Region of Nigeria.

Total Periods in UBE	National maximum	Calculated Full-Time
institutions	Teacher Workload	Teacher Equivalent (FTE)
302	22	13.7

Source: Field-work, 2015

The Full-Time Equivalent Student- Teacher Ratio (FTESTR) was calculated by dividing the No. of students in each school by the Full-Time Teacher Equivalent (FTE). And the FTESTR value for each school was added together and the result was divided by the total number of schools. (Adeyemi, 2004) This is shown in the table 7b

## Table 7b: Analysis of Full Time Equivalent Teacher-Student Ratio in UBEinstitutions in the Niger- Delta Region of Nigeria

S/N of School	Location	No. of Teachers	No. of Students	FTETSR
1	Urban	103	1412	1:103
2	Urban	95	1213	1:88
3	Rural	99	1657	1:120
4	Rural	97	1440	1:150
5	Urban	90	1258	1:91
6	Rural	60	1235	1:90
7	Urban	56	1750	1:127
8	Rural	57	1700	1:124

9	Rural	82	1176	1:85
10	Rural	93	1471	1.03
10	Urban	152	1870	1:136
12	Urban	165	2235	1:163
12	Rural	45	498	1.105
13	Rural	68	1650	1.30
15	Urban	56	1030	1:120
15	Urban	61	1420	1.109
10	Rural	56	1020	1.10)
17	Urban	63	1020	1.74
10	Urban	105	1240	1.00
19	Urban	103	1240	1.90
20	Drugi	55	1/00	1.124
21	Kural	55	1694	1:123
22	Urban	48	1800	1:131
23	Rural	60	530	1:38
24	Rural	58	649	1:47
25	Urban	50	1345	1:98
26	Rural	48	702	1:51
27	Urban	57	1625	1:118
28	Rural	49	981	1:71
29	Urban	68	1315	1:95
30	Urban	64	1520	1:110
31	Urban	59	1800	1:131
32	Urban	54	1120	1:81
33	Rural	51	1430	1:104
34	Rural	48	950	1:69
35	Rural	50	1668	1:121
36	Rural	54	1630	1:118
Tota		2548	49338	3629

### 3629 = 100

### 36

Table 7: shows the utilization rate of teachers in UBE institutions in the Niger- Delta Region of Nigeria using the Full Time Equivalent Teacher-Students Ratio (FTETSR). This gives a value of 1:100. The finding shows that a single teacher in the UBE institutions in the Niger- Delta Region of Nigeria has 100 students to cater for. This implies over- utilization on the part of teachers in the sampled schools as the ratio is higher than the recommended National teacher-students/pupils ratio of 1:35. The school

with the highest teacher-student ratio is Federal Government Girl's College, Akure in Ondo State with ratio 1:163 and the school with the lowest teacher-students/pupils ratio is Kaiama Grammar School, Kaiama in Bayelsa State with ratio of 1:36



Figure 6: Bar-chart showing Teacher-Students/Pupils ratio in UBE institutions

Research Question 6: What are the categories of physical resources available in UBE institutions in the Niger- Delta Region of Nigeria?

### Table 8a: Analysis of physical resources in UBE institutions

" A " ONDO STATE BAYELSA STATE	BAYELSA STATE
--------------------------------	---------------

FACLI	1	2	3	4	5	6	7	8	9	10	11	12	ТО	1	14	15	16	1	18	ТО
TIES													ТА	3				7		ТА
													L							L
CLASS	40	3	41	3	35	3	2	2	3	37	48	50	439	2	43	28	37	1	42	194
ROOMS		4		6		3	5	8	2					6				8		
LIBRAR	1	1	1	1	2	1	1	1	1	1	1	2	14	1	2	1	1	-	1	6
IES																				
BASIC	1	1	1	1	1	1	1	1	1	1	2	2	14	1	1	1	1	1	1	6
SCI.																				
LAB.																				
BASIC	1	1	1	1	1	1	1	1	1	1	1	3	14	1	2	1	1	-	1	6
TECH.																				
LAB.																				
HOME/	1	1	1	1	1	1	1	1	1	1	2	1	13	1	2		1	1	1	6
ECONS.																				
LAB.																				
ASSEM	1	1	1	-	1	-	1	-	-	2	1	2	`10	-	1	1	1	1	-	4
BLY																				
HALL																				
ADMIN.	4	3	6	2	2	2	-	2	2	1	10	10	44	3	4	2	2	2	2	11
OFFICE																				
TUCK	1	1	1	1	1	1	1	1	1	1	2	2	14	1	2	1	1	1	1	7
SHOP																				
ART	1	1	1	1	1	1	1	1	1	1	2	2	14	-	1	1	1	-	1	4
STUDIO																				
STAFFR	4	3	4	3	2	3	2	4	4	4	7	6	46	3	6	2	2	1	3	17
OOM																				
COMPU	2	1	1	1	1	1	1	-	1	1	2	1	14	1	2	2	1	1	2	9
TER						1														
CENTE																				
R																				
TOILET	15	1	16	1	4	7	4	1	8	6	14	30	144	1	30	4	6	3	8	61
		2		8				0						0						
" B"		1	I			1	1	1	1			I		1	1		I	1		
EQUIP																				
MENTS																				
VEHICL	-	-	-	-	-	-	-	-	-	-	1	3	4	-	2	-	1	-	1	4

ES																				
COMPU	15	2	30	3	15	1	1	1	1	10	30	50	214	5	20	10	15	5	10	65
TERS		0		0		0	0	0	5											
" C "													•			•				
MATER																				
IALS																				
CLASS	14	5	16	7	12	5	4	2	5	14	18	22	129	5	16	17	14	5	16	746
ROOM	12	0	57	0	58	5	9	5	7	71	70	35	63	6	00	50	00	0	50	0
FURNIT		0		0		0	0	0	0					0				0		
URES																				
TEACH	70	8	80	8	80	4	4	3	7	80	14	15	945	5	10	10	90	8	95	520
ERS		5		0		0	0	0	0		0	0		0	0	5		0		
CHAIRS																				
BOLE-	3	2	4	2	1	1	1	1	1	1	4	7	28	2	3	2	2	1	2	12
HOLE																				
GENER	3	2	2	2	2	2	2	2	1	2	4	4	27	2	3	2	2	-	2	11
ATORS																				

Source: Field-work, 2015

## Table 8b: Analysis of physical resources in UBE institutions

" A "	ABIA STATE	RIVERS STATE

FACLI	19	20	2	22	2	24	2	2	ТО	27	2	29	3	31	32	33	3	3	3	ТО
TIES			1		3		5	6	ТА		8		0				4	5	6	ТА
									L											L
CLASS	45	42	2	40	4	30	1	1	255	41	3	31	3	45	29	35	3	4	4	366
ROOMS			5		0		9	4			2		4				8	1	0	
LIBRAR	2	2	1	1	2	1	1	1	11	1	1	2	1	2	1	1	1	2	1	13
IES																				
BASIC	2	2	-	-	1	1	-	1	7	2	2	1	2	1	1	1	1	1	1	13
SCI.																				
LAB.																				
BASIC	1	1	-	-	1	1	-	1	5	2	2	1	1	2	2	2	2	3	3	20
TECH.																				
LAB.																				
HOME/	1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	10
ECONS.																				
LAB.																				
ASSEM	1	1	-	-	1	1	1	1	6	1	-	1	1	1	-	1	1	1	1	8
BLY																				
HALL																				
ADMIN.	8	5	2	2	3	3	2	2	27	4	7	5	6	4	4	4	2	2	3	41
OFFICE																				
TUCK	2	2	1	1	1	1	1	1	10	1	2	2	1	1	2	1	1	2	2	15
SHOP																				
ART	2	2	1	1	1	1	1	-	9	1	1	1	1	1	1	-	-	1	1	8
STUDIO																				
STAFFR	6	5	2	2	5	5	3	2	30	6	5	5	7	5	7	6	4	3	4	53
OOM																				
COMPU	2	2	1	1	2	2	2	2	14	1	1	1	1	1	1	1	1	1	1	10
TER																				
CENTE																				

R																				
TOILET	32	25	7	6	1 4	16	1 0	8	118	30	2 0	45	4 0	25	25	30	3 8	4 1	3 0	324
" B"																				
EQUIP																				
MENTS																				
VEHICL	3	1	-	-	1	-	-	-	5	2	2	4	3	2	3	2	2	3	2	25
ES																				
COMPU	33	25	5	5	1	10	7	6	103	28	3	25	1	24	25	32	2	3	2	266
TERS					2						0		8				7	5	2	
" 6 "																				
MATER																				
IALS																				
CLASS	18	15	2	4	90	10	3	5	665	16	7	12	5	22	18	14	5	2	4	110
ROOM	00	00	5	0	0	00	0	0	0	57	0	58	5	35	70	71	7	5	7	31
			0	0			0	0			0		0				0	0	0	
FURNIT																				
URES																				
TEACH	10	11	1	6	80	80	5	1	736	70	9	85	6	90	10	90	8	1	8	853
ERS	0	5	4	1			0	1			0		5		0		3	0	0	
CHAIRS			0					0										0		
BOLE-	4	4	1	1	2	2	1	1	16	2	1	3	2	2	1	2	1	3	1	18
HOLE																				
GENED	2	2	2		2	2	1	1	14	2	2	2	1	1	1	1	1	2	2	14
JENER	5	2	2	1	2	2	1	1	14	5	2	2	1	1	1	1	1	2	2	10
ATORS																				

Source: Field-work, 2015

Table 8 reveals the categories of physical resources in UBE institutions. The categories of physical resources in UBE institutions in the Niger- Delta Region of Nigeria are facility, equipment, and materials. The first category is facilities which include: Classrooms, Library, Laboratories, Assembly halls, Administrative offices, Staffrooms, Computer

Centers, Tuck shops, Toilets and the Art studio. The second category is equipment which is school vehicles, and computers. The third category is materials and includes classroom furniture; teachers table/chairs bore holes and generators. The table also reveals that all the categories of the physical resources were available in UBE institutions in the Niger-Delta Region of Nigeria. There are however four schools without Basic Technology Laboratory and ten schools without Assembly hall and one school without Library. All other schools have the necessary physical resources.

## Research Question 7: Are the available physical resources adequate in UBE institutions in the Niger- Delta Region of Nigeria?

In answering this question, data on the number of physical resources available in UBE schools in the Niger –Delta Region were collected through the Checklist. Data on the number of physical resources needed in all the sampled schools were also determined through the resources list of the National Clearinghouse for Educational Facilities (NCEF) operational guideline for educational facilities which provides the approved standard of each facility type. The data were analyzed using frequency counts and percentages. The findings are presented in Table 9.

Table 9: Analysis of Adequacy of Available physical resources in UBE institutions

" A " FACLITIES	NO.	NO.	SHORT	% OF	REMARK
	AVAILABLE	NEEDED	FALL	ADEQUACY	
Classrooms	1254	1566	312	80	Adequate
Libraries	44	57	13	77	Adequate
Basic Sci. Lab.	40	90	50	44	Inadequate
Basic Tech. Lab.	45	130	85	35	Inadequate
Home Econ. Lab.	37	108	71	34	Inadequate
Assembly Hall	28	48	20	58	Inadequate
Admin. Office	128	300	172	43	Inadequate
Tuck shop	46	24	22	52	Inadequate
Art studio	35	72	37	49	Inadequate
Staffroom	146	510	364	29	Inadequate
Computer center	47	44	3	93	Adequate
Toilet	647	2283	1636	28	Inadequate
" B" Equipments					
School Vehicles	38	198	160	19	Inadequate
Computers	545	1800	1256	30	Inadequate
" C " Materials		•	•		
Classroom furniture	38104	42000	3896	89	Adequate
Teachers chairs	3054	3447	393	86	Adequate
Bole-Hole	74	285	211	25	Inadequate
Generators	68	120	52	57	Inadequate

Key:

 $\geq$  75 = Adequate

 $\leq$  75 = Inadequate

Table 9: shows the adequacy of the physical resources in UBE institutions in the Niger-Delta Region of Nigeria. The result reveals that the school resources that met 75% adequacy are fewer. Classrooms have 80% adequacy, Libraries have 77% adequacy, computer centers 93% adequacy, Classroom furniture 89% and teachers' chairs have 86% adequacy. The rest facilities have less than 75% benchmark. The adequacy level of all the physical resources in UBE institutions in the Niger- Delta Region of Nigeria is 85%. This shows that there are adequate physical resources in the schools.

## Research Question 8: What is the utilization rate of the following physical resources in UBE institutions in the Niger- Delta Region of Nigeria?

- a) Classrooms
- b) Basic science Laboratory

Table 10a and 10b presents results of the computation of the Time Utilization Rate (TUR), the Space Utilization Rate (SUR) and the Global Utilization Rate (GUR) used to determine the extent to which classrooms and basic science laboratory are effectively utilized.

Time Utilization Rate (TUR) "is the ratio between the number of hours (or periods) during which a class is put into use per week and the theoretical number of hours or periods available per week by convention" (Owolabi, 1990).

Mathematically:  $TUR = Actual No. of hours of use \times 100$ Theoretical No. of hours

Space Utilization Rate (SUR) "compares the average size of the sections occupying a room (average number of students in a classroom and laboratory) and the theoretical capacity of the room (average number of seats in the classroom and laboratory)" (Owolabi, 1990) This is represented thus:

Mathematically: SUR = Average no. of students in attendance x 100Actual no. of student spaces available

Global Utilization Rate (GUR) is derived from the TUR and SUR. It gives the ratio between the number of student hours occupied and the theoretical number of student hours available (Owolabi, 1990).

Mathematically:  $GUR = TUR \times SUR$ 

100

The GUR is an index of how much under-utilized or over-utilized a school classroom and laboratory is.

### **Table 10a: Classroom Utilization Rate**

SCH	LOCATIO	TIME	SPACE	GLOBAL	REMAR
•	Ν	UTILIZATIO	UTILIZATIO	UTILIZATIO	K
		N RATE	N RATE	N RATE	

		(TUR) %	(SUR) %	(GUR)%	
1	Urban	82	87.5	72	Under-
					Utilized
2	Urban	82	92.5	76	Optimally-
					Utilized
3	Rural	82	103	85	Optimally-
					Utilized
4	Rural	82	100	82	Optimally-
					Utilized
5	Urban	82	90	74	Under-
					Utilized
6	Rural	82	95	78	Optimally-
					Utilized
7	Urban	82	105	86	Optimally-
					Utilized
8	Rural	82	98.8	81	Optimally-
					Utilized
9	Rural	82	92.5	76	Optimally-
					Utilized
10	Rural	82	100	82	Optimally-
	4				Utilized
11	Urban	82	98	80	Optimally-
10	<b>TT 1</b>	00	120		Utilized
12	Urban	82	120	98	Optimally-
10	D 1	02	00	0.0	Utilized
13	Rural	82	98	80	Optimally-
1.4	D	02	0.0.2		Outlinzed
14	Kurai	82	98.2	80	Utilized
15	Urbon	87	111	01	Ontimelly
15	Ulball	02		91	Utilized
16	Urbon	87	102.5	<u><u> </u></u>	Ontimelly
10	Ulball	02	102.3	04	Utilized
17	Durol	82	08	80	Ontimally
1/	Kulai	02	70	00	Utilized
18	Urban	82	101	83	Ontimally-
10	Orban	02	101	05	Utilized
19	Urban	82	103	84 5	Optimally-
					Utilized
20	Urban	82	111.8	92	Optimally-
					Utilized
21	Rural	82	105.8	87	Optimally-

					Utilized
22	Urban	82	100	82	Optimally-
					Utilized
23	Rural	82	95	78	Optimally-
					Utilized
24	Rural	82	85	70	Optimally-
					Utilized
25	Urban	82	112	92	Optimally-
					Utilized
26	Rural	82	97.5	80	Optimally-
					Utilized
27	Urban	82	99	81	Optimally-
					Utilized
28	Rural	82	92.5	76	Optimally-
					Utilized
29	Urban	82	106	87	Optimally-
					Utilized
30	Urban	82	111.8	92	Optimally-
					Utilized
31	Urban	82	100	82	Optimally-
					Utilized
32	Urban	82	96	79	Optimally-
					Utilized
33	Rural	82	102	84	Optimally-
					Utilized
34	Rural	82	95	78	Optimally-
					Utilized
35	Rural	82	101	83	Optimally-
2.5			1.04		Utilized
36	Rural	82	101	83	Optimally-
					Utilized

Source: Field-work, 2015

Key:

 $\geq$  75% = Optimally Utilized

 $\leq$  75% = Under Utilized

 $\geq$  100% = Over Utilized

Table 10a: Reveals the classroom utilization of UBE institutions in the Niger- Delta Region of Nigeria. The utilization rate shows that classroom facilities are optimally utilized in thirty four schools (34) The GUR ranges from 76% to 98% while there is under-utilization in two schools with GUR of 72% to 74%. The utilization rate of classroom in UBE institutions in the Niger- Delta Region of Nigeria.is 78%; this reveals an optimal-utilization of classrooms. 100% utilization is difficult to achieve for classrooms as students/pupils cannot be in the classroom for all the hours of school opening.



Figure 7: Bar-chart showing Classroom Utilization Rate in UBE institutions

 Table 10b: Basic Science Utilization Rate

SCH	LOCATIO	TIME	SPACE	GLOBAL	REMAR
•	Ν	UTILIZATIO	UTILIZATIO	UTILIZATIO	K
		N RATE	N RATE	N RATE	
		(TUR) %	(SUR) %	(GUR)%	
1	Urban	100	95	85	Optimally-
					Utilized
2	Urban	100	100	100	Optimally-
					Utilized
3	Rural	100	96.3	96	Optimally-
					Utilized
4	Rural	100	93	93	Optimally-
					Utilized
5	Urban	100	72.6	73	Under-
					Utilized
6	Rural	100	88	88	Optimally-
					Utilized
7	Urban	100	105	105	Over-
					Utilized
8	Rural	100	100	100	Optimally-
					Utilized
9	Rural	100	83.5	84	Optimally-
					Utilized
10	Rural	100	92	92	Optimally-
					Utilized
11	Urban	100	80	80	Optimally-
					Utilized
12	Urban	100	111	111	Over-
					Utilized
13	Rural	100	90.7	91	Optimally-
					Utilized
14	Rural	100	98	98	Optimally-
					Utilized
15	Urban	100	98	98	Optimally-
					Utilized
16	Urban	100	105	105	Over-
					Utilized
17	Rural	100	98	98	Optimally-
					Utilized
18	Urban	100	110	110	Over-
					Utilized

19	Urban	100	98	98	Optimally-
	01000	100			Utilized
20	Urban	100	135	135	Over-
	orown	100	100	100	Utilized
21	Rural	100	105	105	Over-
21	Itului	100	100	100	Utilized
22	Urban	100	100	100	Optimally-
		100	100	100	Utilized
23	Rural	100	95	95	Optimally-
					Utilized
24	Rural	100	85	85	Optimally-
					Utilized
25	Urban	100	90	90	Optimally-
					Utilized
26	Rural	100	100	100	Optimally-
					Utilized
27	Urban	100	100	100	Optimally-
					Utilized
28	Rural	100	94	94	Optimally-
					Utilized
29	Urban	100	105	105	Over-
					Utilized
30	Urban	100	150	150	Over-
					Utilized
31	Urban	100	100	100	Optimally-
					Utilized
32	Urban	100	110	110	Over-
					Utilized
33	Rural	100	143	143	Over-
					Utilized
34	Rural	100	95	95	Optimally-
					Utilized
35	Rural	100	136	136	Over-
					Utilized
36	Rural	100	123	123	Over-
					Utilized

Source: Field-work, 2015

Key:

 $\geq$  75% = Optimally Utilized

 $\leq$  75% = Under Utilized

### $\geq 100\% = \text{Over Utilized}$

Table 10b: Shows the Utilization of Basic Science Laboratory, it reveals that there is Optimal utilization of Basic Science Laboratory in Twenty four (24) schools while eleven schools has Over-utilization of their Basic Science Laboratory and there is Underutilization in one school. The school with the highest utilization rate for Basic Science Laboratory is Pabod Model Primary School, PortHarcout in Rivers State with GUR of 150% and Government Primary School, Owo in Ondo State has the lowest GUR of 73%. The utilization rate of Basic Science Laboratory is 102%. The result reveals Overutilization of Basic Science Laboratory.



Figure 8: Bar-chart showing Basic Science Laboratory Utilization Rate in UBE institutions

**Testing of Research Hypotheses:** 

Ho<sub>1</sub>: There is no significant difference between the state of human resources (teachers) availability in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Table 11: Chi- Square (X2) table showing the significant differences between HumanResources (teachers) availability in rural and urban UBE institutions

S/N	STATE	LOCA	TION	TOTAL	Df	$\mathbf{X}^{2}$	$X^2$	Decision
		Rural	Urban			Calculated	Critical	
						Value	Value	
1	ONDO	445	704	1149				
		(451)	(698)					
2	BAYELSA	148	201	349				
		(138)	(211)					ant Ho <sub>1</sub> )
3	ABIA	166	330	496	3	12.76	7.815	ifics ted
		(195)	(301)					Signi
4	RIVERS	242	312	554				(F)
		(218)	(336)					
ŗ	ΓΟΤΑL	1001	1547	2548				

Expected frequencies are indicated in brackets

In Table 11, the  $X^2$  Calculated Value of (12.76) is greater than the  $X^2$  Critical Value of (7.815) at 0.05 level of significance. The result is significant, hence the null hypothesis was rejected. Therefore school location significantly influences the availability of teachers in UBE institutions in the Niger- Delta Region of Nigeria.

Ho<sub>2</sub>: There is no significant difference between the distribution pattern of Human Resources (teachers) by qualifications in UBE institutions in the Niger- Delta Region of Nigeria.

S/N	NCE	HN	B.S/	B.A/	B.A.	B.SC	M.Ed	Ph.D		D	$X^2$	$X^2$	_	
		D	PGD E	PGD E	(Ed)	(Ed)	•	•	tal	f	Cal. Value	Crit. Valu	sion	
									To			e	Deci	
1	13	4	10	20	28	16	11	1	103					
	(7.3)	(4.3)	(20.5)	(13.9)	{19.7	{19.3	{16.5	(1.1)						
					)	)	}							
2	7	6	29	7	19	14	13	-	95					
	(6.9)	(3.9)	(18.9)	(12.8)	(18.2)	(17.7)	(15.3)	(0.99						
3	5	4	24	13	16	22	13	2	99					
	(7.2)	(4.1)	(19.7)	(13.4)	(19)	(18.5)	(15.9)	(1.03						
4	7	4	41	12	9	10	14	-	97					
	(7.1)	(4.1)	(19.3)	(13.2)	(19)	(18.1)	(16)	(1.01						
5	10	4	17	6	17	19	16	1	90					
	(6.5)	(3.7)	(18)	(12.2)	(17.2)	(17)	(14.4)	(0.94					<b>L</b>	02)
6	6	4	10	16	10	9	5	-	60				cant	d H
	(4.4)	(2.5)	(12)	(8.1)	(11.5)	(2.4)	(10)	(0.62		11	270.6	19.68	gnifi	jecte
7	5	1	13	9 (8)	10	15	3 (9)	-	56		8		Si	(Rej
	(4.1)	(2.3)	(11.1)		(11)	(10.4)		(0.58						
8	12	5	17	8 (8)	8 (11)	5 (11)	1	1	57					
	(4.2)	(2.4)	(11.4)				(9.1)	(0.6)						
9	4	2	9	19	24	17	5	2	82					
	(5.9)	(3.4)	(16.3)	(11.1)	(16)	(15.3)	(13.2)	(0.85						
10	10	5	24	10	18	18	7 (15)	1	93					
	(6.7)	(3.8)	(19)	(13)	(18)	(17.4)		(0.97						
11	3	7	23	22	16	40	38	3	152					
	(11.1	(6.3)	(30.2)	(21)	(29.1)	(28.4)	(24.4)	(1.58						
	)							,						

Table 12: Chi- Square  $(X^{2})$  table showing the significant differences between teachers distribution by qualifications in UBE institutions

12	2	2 (7)	10	16	45	30	59	1	165		
	(12.1		(32.8)	(22.4)	(32)	(31)	(27)	(1.7)			
	)										
Tota	84	48	229	156	220	215	185	12	114		
1									9		

Expected frequencies are indicated in brackets

The calculated chi-Square value of (270.68) is greater than critical value of (19.68) at 0.05 level of significance. This shows that there is a significant difference in the distribution of teachers by qualification in UBE institutions in the Niger- Delta Region of Nigeria.

## Ho<sub>3</sub>: There is no significant difference between teachers' years of experience in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Table 13: Chi- Square  $(X^{2})$  table showing the significant differences between the distribution of teachers by years of experience in rural and urban UBE institutions

School		Yea	rs of Expe	rience		Total	Df	X <sup>2</sup> Cal.	X <sup>2</sup> Crit.	Decision
Location	1-5	6-10	11-15	16-20	Above			Value	Value	
					20					
D 1	20	101	107	122	0.0	400				
Rural	20	121	127	122	98	488				
	(24.6)	(111.7)	(158.8)	(103.2)	(89.6)			21.16	9.488	o3)
Urban	38	142	247	121	113	661	4			fica H(
	(33.4)	(151.3)	(215.2)	(139.7)	(121.4)					Signi ected
Total	58	263	374	243	211	1149				Rej

Expected frequencies are indicated in brackets

The calculated Chi-square value of (21.16) is greater than critical value of (9.488) at 0.05 level of significance. This reveals that there is a significant difference in the distribution
of teachers by years of experience in UBE institutions. This means that location affect the distribution of teachers by years of experience.

Ho<sub>4</sub>: There is no significant difference between the average weekly periods allocated to teachers in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Table 14: Chi- Square  $(X^{2})$  table showing the significant differences between the average weekly periods allocated to teachers in rural and urban UBE institutions

School	17.1-18	18.1-19	19.1-20	20.1-21	Total	Df	X <sup>2</sup> Cal.	X <sup>2</sup> Crit.	Decision
Location							Value	Value	
Rural	2 (1)	1 (2.5)	4(0.5)	- (2.5)	6				Not
Urban	-(1)	4 (2.5)	-(0.5)	2 (2.5)	6	3	5	7.82	Significant
Total	2	5	-	5	12				(Retained
									H04)

Expected frequencies are indicated in brackets

Table 14: The calculated Chi-square value of (5) is lower than the critical value of (7.82) at 0.05 level of significance. This shows that there is no significant difference in the average weekly periods allocated to teachers in rural and urban UBE institutions and location does not influence the average weekly periods of teachers in UBE institutions in the Niger- Delta Region of Nigeria.

Ho<sub>5</sub>: There is no significant difference between the teacher- students/pupils ratio in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

S/N	LOCATION		TOTAL	Df	X <sup>2</sup> Cal.	X <sup>2</sup> Crit.	Decision
	Rural	Urban			Value	Value	
1	120 (101.2)	103 (121.7)	223				
2	150 (108)	88 (129.9)	238	-			
3	90 (82.1)	91 (98.8)	181				
4	124 (113.9)	127 (137)	251				
5	85 (100.3)	136 (120.6)	221	-			
6	107 (122.6)	163 (147.3)	270				
7	36 (63.1)	103 (75.8)	139				
8	120 (103.9)	109 (125)	229				
9	74 (71.2)	83 (85.7)	157	17	179.2	27.59	nt Hos)
10	123 (96.7)	90 (116.2)	213				ifica ted ]
11	38 (73.5)	124 (88.4)	162				Sign
12	47 (80.8)	131 (97.1)	178				, R
13	51 (67.6)	98 (81.3)	149				
14	71 (85.8)	118 (103.1)	189				
15	104 (90.3)	95 (108.6)	199				
16	69 (81.2)	110 (97.7)	179	1			
17	121 (114.4)	131 (137.5)	252	1			
18	118 (90.3)	81 (108.6)	199	1			
Total	1648	1981	3629				

Table 15: Chi- Square  $(X^{2})$  table showing the significant differences between the teacher- students/pupils ratio in rural and urban UBE institutions

Expected frequencies are indicated in brackets

From Table 15: Chi-square value of (179.2) is greater than critical value (27.59) at 0.05 level of Significance. The hypothesis is therefore rejected. This means that there is a significant difference in the Teacher Students/Pupils Ratio of Rural and Urban UBE institutions in the Niger- Delta Region of Nigeria.

Ho<sub>6</sub>: There is no significant difference between the availability of physical resources in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Table 16: Chi- Square  $(X^{2})$  table showing the significant differences between the availability of physical resources in rural and urban UBE institutions

Physical Resources	Physical Resources LOCATION		TOTAL	Df	X <sup>2</sup> Cal.	X <sup>2</sup> Crit.	Decision
	Rural	Urban	-		Value	Value	
Classrooms	207 (182)	232 (257)	439				
Libraries	6 (5.8)	8 (8.1)	14	1			
Basic Sci. Lab.	6 (5.8)	8 (8.1)	14	1			
Basic Tech. Lab.	8 (5.8)	6 (8.1)	14				
Home Econ. Lab.	6 (5.4)	7 (7.5)	13	1			
Assembly Hall	3 (4.1)	7 (5.8)	10				
Admin. Office	15 (18.2)	29 (25.7)	44				
Toilet	65 (59.8)	79 (84.1)	144				(%
Staffroom	22 (18.3)	24 (27.7)	46				cant d Ho
ICT. center	6 (5.8)	8 (8.1)	14	1			gnifi ecte
School Vehicles	- (1.6)	4 (2.3)	4	16	49.93	26.296	Sig (Rej
Computers	74 (88.8)	140 (125)	214				_
Teachers chairs	380 (392)	565 (553)	945				
Bole-Hole	10 (11.6)	18(16.4)	28				
Generators	10 (11.2)	17(15.7)	27				
Art studio	6 (5.8)	8 (8.1)	14				
Tuck shop	6(5.8)	8 (8.1)	14	1			
Total	830	1168	1998				

Expected frequencies are indicated in brackets

The calculated chi-square value of (49.93 is greater than the critical value of (26.296 at 0.05 level of Significance. This shows that there is a significant difference in the availability of physical resources in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Ho<sub>7</sub>: There is no significant difference between the utilization of physical resources in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

Table 17a: Chi- Square  $(X^{2})$  table showing the significant differences between the utilization of classroom in rural and urban UBE institutions

S/N	LOCATION		TOTAL	Df	X <sup>2</sup> Cal.	X <sup>2</sup> Crit.	Decision
	Rural	Urban			Value	Value	
1	85 (76.5)	72 (80.4)	157				Si gn ifi ca

18	83 (79.01)	79 (82.9)	162				
17	83 (80.4)	82 (84.5)	165	1			
16	78 (82.9)	92 (87.1)	170	1			
15	84 (83.4)	87 (87.5)	171	1			
14	76 (76.5)	81 (80.4)	157	1			
13	80 (83.8)	92 (88.1)	172	1			
12	70 (74.1)	82(77.8)	152				
11	78 (82.9)	92 (87.1)	170				
10	87 (83.6)	84.5 (87.8)	171.5	17	35.14	27.587	
9	80 (79.5)	83 (83.4)	163				
8	80 (79.9)	84 (84)	164				
7	80 (83.4)	91 (87.5)	171				
6	82 (87.7)	98 (92.2)	180				
5	76(76.1)	80 (79.9)	156				
4	81 (81.4)	86 (85.5)	167				
3	78 (74.1)	74 (77.8)	152				
2	82 (77.06)	76 (80.9)	158				

Expected frequencies are indicated in brackets

The calculated chi square value of (35.14) is greater than the critical value (27.587) at 0.05 level of significance. This shows that there is a significant difference in the utilization of classrooms in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

# Table 17b: Chi- Square (X<sup>2)</sup> table showing the significant differences between the utilization of Basic Science Laboratory in rural and urban UBE institutions

S/N	LOCATION		TOTAL	Df	X <sup>2</sup> Cal. Value	X <sup>2</sup> Crit. Value	Decision
	Rural	Urban					
1	96 (89.5)	85 (91.4)	181				t IÏ
2	93 (95.4)	100 (97.5)	193				Sign

3	88 (79.6)	73 (81.3)	161				
4	100 (101.4)	105 (103.5)	205				
5	84 (81.1)	80 (82.8)	164				
6	92 (100.4)	111 (102.5)	203				
7	91 (93.4)	98 (95.5)	189				
8	98 (100.4)	105 (102.5)	203				
9	98 (102.8)	110 (105.1)	208				
10	105 (100.4)	98 (102.5)	203	17	39.31	27.587	
11	95 (113.7)	135 (116.2)	230				
12	85 (91.5)	100 (93.4)	185				
13	100 (93.9)	90 (96)	190				
14	94 (95.9)	100 (98)	194	1			
15	143 (122.6)	105 (125.3)	248	1			
16	95 (122)	150 (123)	245	1			
17	136 (116.7)	100 (119.2)	236	1			
18	123 (115.2)	110 (117.7)	233	1			
Total	1816	1855	3671	1			

*Expected frequencies are indicated in brackets* 

The calculated chi square value of (39.31) is greater than the critical value (27.587) at 0.05 level of significance. This shows that there is a significant difference in the utilization of Basic Science Laboratory in Rural and Urban UBE institutions in the Niger-Delta Region of Nigeria.

# **Discussion of Results**

# State of Human Resources (teachers) Availability

The study reveals that there are 2548 teaching staff and 918 non-teaching staff in UBE institutions in the Niger- Delta Region of Nigeria. In all the sampled schools, the teaching staff was more than the non- teaching staff. The analysis of the data showed that the UBE institutions in the Niger- Delta Region of Nigeria were staffed with adequate qualified

teachers. This is supported by 74% (2548) of the total respondents. This finding is in line with Nakpodia (2000) who opined that human resources (i.e. teachers) are important prerequisite for national development in order to achieve the desired outcomes of any establishment (i.e. the UBE programme). These objectives no doubt are laudable and their advancement depends on factors such as provisions of well trained teachers, textbooks, equipment and facilities (Olubor, 2000). Dowies (2001) also opined that, if the mission of the UBE is to channel the desired skills, attitudes and abilities of its graduates toward self-sustaining creative abilities, it should take serious and make adequate provision for the preparation and training of skilled human resources (teachers) in order to effectively manage not only the educational system but the entire country.

Also studies on the relationship between availability of human resources and academic performance have shown that human resources enhance academic performance of students. Ayodele (2000), Adewuyi (2002) and Okandeji f2007) had in their various researches submitted that teachers constitute a very significant factor to students' success. Similarly, Dareng and Attah (2000) quoting (Lassa, 2000) said teachers are nation builders and as such their training will equip them for laying a solid educational foundation right from the primary level.

However, the study revealed significant differences in the availability of human resources (teachers) in UBE institutions. It shows that differences do exist in the availability of human resources in rural and urban UBE institutions; findings of this study supported that of Abidogun (2006) who reported that many teachers reject posting to the rural areas while those that do, treat their presence in such areas as a part-time assignment. Edho (2009) said that some of the constraints that affect the success rates of the UBE programme in the rural communities is teachers [adequacy and their unwillingness to be posted to rural schools.

## **Teachers Distribution by Qualifications**

The findings of research question 2 reveals the distribution of teachers by qualifications in UBE institutions in the Niger- Delta Region of Nigeria. The result shows that over 94% of teachers in UBE institutions in the Niger- Delta Region of Nigeria have teaching qualifications. This is in accordance with ESA report of 2005 which requires that majority of Nigerian Primary and Secondary School teachers should hold NCE and Bachelors in education to teach in primary and secondary schools.

The results of this study however run contrary to\* the finding of Amoo [2003) in his study, "Demand and Supply of teachers in Osogbo Local Government Area of Osun State, Nigeria. He identified wide gaps between the demand and supply of qualified teachers in the state. Shortage of qualified teachers demand as revealed by the findings of his study was expressed as 44% in the 1999/2000 session, 56% in the 1980/81 session and 51% in the 2001/2002 session. The success of any organization is a resultant effect of the quantity and quality of its work force. Ayodele (2000) has argued that no matter how efficient and effective an administrator is, he hardly achieves success without the support and cooperation of well-qualified and dedicated staff. Highly qualified teaching staff is education best resources and assets. Aihievboloria (2005) ascertained that the school is an essentially human organization because it has human operatives. The need for adequate staffing is clearly demonstrated by the way secondary school students continue to move from one school to another in search of schools with better qualified teachers.

The result is also at variance with the result of Akinsolu (2010) in his study Teachers and Students Academic Performance in Nigerian Schools: Implication for Planning. He discovered that majority of the teachers in her study hold the NCE certificate in Osun State Public Secondary School teaching Personnel. NCE teachers are meant to teach in the primary schools. Akhaine (2001) reported that with the increase in the supply of qualified teachers from the various higher institutions in the country, more teachers should be employed into the school system. The high number of teachers who had B.Ed level of qualification was probably due to the fact that teachers have been accorded the status of professionalism and no teacher is expected to teach in Nigerian schools without teaching qualification. Result of this study is however not surprising as the UBE institutions ought to be a model for other schools owned by private individuals.

Besides, the study has found significant differences in the distribution of teachers in rural and urban UBE institutions by qualification. The result reveals that there is a significant difference in the distribution of teachers by qualification ( $X^2$  Cal. = 270.68) (P < 0.05). This revealed an unequal distribution of teachers by qualifications and years of experience in UBE institutions. This result is supported by the findings of Adeyemi (2009) who discovered that the Ekiti State Government had not been paying much attention to distribution of teachers to schools as there are more qualified teachers in urban schools than rural schools.

## **Position of Teachers' Years of Experience**

On the position of teachers' years of experience in UBE institutions in the Niger-Delta Region Nigeria, the result revealed that out of 2548 teaching staff in UBE institutions, 2341 have teaching experience of between 6 to 20years. Findings have shown that teachers' years of experience is a measure of quality and thus becomes imperative in the achievement of students' academic performance. The influence of experience on teachers' performance in schools has been highlighted by many researchers. Akinleye, (2001) and Ijaiya (2000) have given different opinions about teaching experience. Their arguments center on the fact that experience improves teaching skills while students learn better at the hands of teachers who have taught them continuously over a period of years. Findings of Ruggai and Agin (2008) also established that teachers' experiences and qualifications have a potent impact on their job performance. They concluded that experienced and

widely trained teachers perform well than a less-experienced teacher with a lower level of training. Adeyemi (2008) explained that schools having more teachers with five years' and above teaching experience achieve better results than schools having more teachers with less than five years" teaching experience.

Also, Razouki (1987) found that experience improves teaching skills and pupils learn better in the hands of teachers who have taught them continuously over a period of years. Similarly, Rice (2003) reported that teachers become more skillful with experience. Apata (2013) carried out a study on teachers experience and students' numerical proficiency of students in solving science problems in secondary school. The study revealed that the numerical proficiency of students taught by experienced science teachers was better than those taught by less-experienced science teachers. This is in agreement with the findings of Olokoba (2000); Ijaiya (2000); Richard and Barbara (2002) who found that experienced teachers were more productive than their inexperienced counterparts. Highly experienced teachers were more in number than inexperienced teacher probably because the various SUBEB have not embark on recent employment of teachers.

Furthermore, the study has revealed significant differences in the distribution of teachers in rural and urban UBE institutions by years of experience. The result reveals that there is a significant difference in the distribution of teachers by years of experience ( $X^2$  Cal. = 21.16) P < 0.05. This revealed uneven distribution of teachers by years of experience in UBE institutions.

## **Average Weekly Periods of Teachers**

The average weekly periods of teachers in UBE institutions in the Niger- Delta Region of Nigeria is 21 periods. Specifically English Language teachers and Mathematics teachers were allocated average periods of 28 (twenty eight) and 29 (twenty nine) periods respectively. The teachers of Christian Religious Studies and Business Studies have the

lowest periods allocation of between 12 (twelve) and 16 (sixteen) periods. This shows that teachers are optimally - utilized in relation to period's allocation.

Oni (1995) viewed under -utilization of teachers as one who handles less than the official number of 18 periods per week in secondary schools. The implication of this is that they are over utilized when they teach over and above these conventional periods. Similar to this, the policy guideline for the implementation of Nigeria Education system likewise recommend a minimum of 18 periods per week and a maximum of 22 periods per teacher per week. This result is in consonance with the view of Aghenta(2004) who reported variation in teachers' workload in Nigeria schools. According to him, it is true that a few are over worked but when the average is taken; he discovered that teachers teach 15 periods out of 36-40 periods a week. Furthermore, he pointed out that "some teachers have no other assignment apart from the few classes they teach, but a few others in addition to heavy teaching loads are charged with games, sports and students personnel administration. As at the time of his study, he observed that generally teachers were under-utilized. The result of Tijani (2011) is the same with Aghenta (2004). In his own study of supply and utilization of teachers for students' academic performance in Kwara state Secondary Schools, he discovered that the average number of periods per teacher in the state is 15 (fifteen) periods which shows that, all teachers in the state are underutilized. However, Nwagwu (1998) study is contrary to Agenta (2004), and Tijani (2011) in his study, findings revealed that many states of the country; secondary school teachers teach as many as 30 periods a week that is an average of 6 periods a day. In short they teach from the time they arrive to the time school closes.

Moreover, the study has found non-significant differences in the average weekly periods allocated to teachers in rural and urban UBE institutions. The result shows no significant differences. This result is contrary to Akinsolu (2011) when she discovered that rural schools are being over-utilized than their counterpart in the urban schools in terms of period's allocation.

#### Full-Time Equivalent Teacher -Students ratio (FETSR)

To obtaining a more realistic indication of the rate of utilization of teachers, an analytical calculation of Roach (1995) as used by Akinsolu (2011) was adopted using the Full-Time Equivalent Teacher -Students ratio (FETSR) to determine the teacher student's ratio in UBE institutions. The calculated FTE in Table 7a is 13.7, the FTE is used to divide the number of students in the schools and this gives the FESTR presented in Table 7b. This method provides in-depth information on the over and under-utilization of teachers within the system.

The result presented in Table 7b shows an average of the Full-Time Equivalent Teachers-Student Ratio of 1:100. The findings depicts that a single teacher in UBE institutions in the Niger- Delta Region of Nigeria have 100 students/pupils to cater for while teaching. This implies over -utilization on the part of teachers in the school as at the time of study. This result ran contrary to UNESCO standard and that of National Policy on Education specifying a maximum of 35 or 40 students/pupils per teacher respectively, (FGN, 2004) and UNESCO (2000) .The result of this study agrees with Akinsolu, (2011) in his study on teachers utilization in Ondo State Public Secondary Schools, Nigeria: some planning implications, he discovered a FETSR of 1:67 which shows over utilization of teachers in the state. The findings of this study is also in support of the findings of Ebong and Agabi(1999). They examined the level of wastage in manpower utilization in the cross rivers state. The data analysis reveals a gross wastage of teachers through over-utilization due to an overall shortage of teachers in the system. The nature of wastage was attributed to work overload in the form of excess teaching periods in some subjects and high teachers' pupils' ratio.

Similarly, the study has revealed significant differences in the teacher-students/pupils ratio in rural and urban UBE institutions in the Niger- Delta Region of Nigeria. The result shows that there is a significant difference in the teacher- students' ratio of rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

### **Categories of Physical Resources Available**

Findings from research question 6 revealed the categories of physical resources available in UBE institutions in the Niger- Delta Region of Nigeria. The categories are facilities, materials, and equipment. There is a general belief that the condition of school learning environment including infrastructure has an important impact on teachers' effectiveness and students' academic performance. The facilities that are needed to facilitate effective teaching and learning in an educational institution include the classrooms, offices, libraries, laboratories and other buildings as well as furniture items and sporting equipment. The quality of infrastructure and learning environment has strong influence on the academic standard which is an index of quality assurance in the school. For instance, Earthman (2002), reporting on California, reveals that comfortable classroom temperature and smaller classes enhance teachers' effectiveness and provide opportunities for students to receive more individual attention, ask more questions, participate more fully in discussions, reduce discipline problems and perform better than students in schools with substandard buildings by several percentage points.

Data presented for categories of physical resources reveal that all categories of physical resources are available in UBE institutions except for 10 (ten) schools without assembly hall, 4 (four) schools without Basic Technology Laboratory and 1 (one) school without Library. Assembly halls are usually used for gathering the students for devotional time, where information is generally passed on to students and in additions used for social activities, the performing arts and also for community forum. According to Graves (1993) the assembly hall should be for dance, drama, music and display of student and community work. The analysis shows that 85% of the school have assembly hall.

Furthermore, the study has revealed a significant differences in the availability of physical resources in UBE institutions, It shows that differences do exist in the availability of physical resources in rural and urban UBE institutions; findings of this study supported those of Olamiju and Olujimi (2011) in their study, "Regional analysis of

locations of public educational facilities in Nigeria. "The Akure Regional Experience", shows that there is lopsidedness in the distribution of educational facilities in the region. Most of the educational facilities are concentrated in the urban area at the expense of the rural schools. The result of this study is also supported by the statement of Oyebode (2006). He remarked that it was a common sight to find that most schools especially in rural areas have inadequate construction of classrooms, laboratories and non-existence of libraries and other teaching inputs that are essential for effective teaching and learning.

## **Adequacy of Physical Resources**

For analyzing the adequacy of physical resources in UBE institutions in the Niger- Delta Region of Nigeria, the numbers of needed facilities and the numbers available were examined, the shortfall between the two was calculated. The percentage for adequacy of available resources was 75% hence any percentage below 75% was considered inadequate while above 75% was considered adequate. According to Yusuf and Akinniranye (2011), the organizational difficulties of the time- tabling often make it difficult for schools to attain utilization rate of over 75%, hence 75% was considered adequate. The school climate is determined by the resources especially classroom under which the teachers and the students operate which influence teaching-learning process. Uwhereka (2005), in his study reveals that facilities below approved standard could lead to reduction in quality of teaching and learning in school resulting to poor students' academic performance. According to Olugbenga (1997), the level of resources available to any educational system and the way they are put to use will determine to a great extent the performance of that system.

The findings on the adequacy of the various categories of physical facilities reveals that the UBE institutions in the Niger- Delta Region of Nigeria needed 1566 classrooms while 1245 were available and the short fall 312, this shows that 80% of the students population have adequate classroom space and inadequacy of 20%. This generally shows that there

is adequacy of classroom in all the schools. The problem of inadequacy of classroom affect effective teaching and learning as so many students crowd into a classroom and rather than learn, disturb the class. The classroom, according to Bullrock (1997), must provide an appropriately stimulating environment that will support learning. The result of this study is contrary to the findings of Afolabi (2002), while reporting on Ondo State secondary schools; he discovered that the classrooms in most of the schools were inadequate in terms of decency, space, ventilation and insulation from heat.

The data collected on adequacy of library facilities reveals 77% adequacy which means that the library facilities are adequate. The finding of this Study is contrary to Ayodele and Oyebanji (2007) in their study of Personnel and Physical Resource Utilization in southern Nigerian Primary Schools. It revealed that out of 44 (forty-four) schools examined in urban areas and 10 (ten) in rural areas only 4 (four) have library facilities in urban while 1 in rural area. This result of inadequacy is supported by the result of Bello et al (2008) in their study "a survey of school libraries facilities and resources in Offa Local Government Area of Kwara State. They discovered that all the seventeen (17) secondary schools examined boast of one form of library or the other. Akinsanya (2008) reported that, the school library serves as the center of the intellectual life of the school available all times for reference, for study and for private reading. A school library supplements and enriches work done in other subjects taught in the school.

For facilities like Basic Science Laboratory, Basic Technology Laboratory and Home Economics, there is 44%, 35% and 34% adequacy respectively. This result shows inadequacy of laboratories in UBE institutions in the Niger- Delta Region of Nigeria. Although all the schools have at least one laboratory it was considered inadequate considering the number of students in the schools. According to Agbogun (1991) practical work in sciences provides students with opportunities to engage in processes of investigation and inquiry. Practical work also gives students appreciation of the spirit and method of problem solving, analytic and generalization ability. This can only be achieved in the use of laboratory for practical.

Result of this study supported the findings of Black etal (1998) who found in Uganda that science education is faced with the problem of lack of resources with half the schools having no real laboratory. This is also in accordance with Adeyemi (2008) in his study of Science Laboratory in Ondo State. He concluded that there was inadequate provision of science laboratories and equipment in many schools in Ondo State. This also agreed with the findings made by Onipede (2003) that there were shortages of science laboratory facilities in schools.

Administrative office and staffroom were also considered inadequate as they all felt short of the 75% benchmark for adequacy of the facilities. Administrative office is very important for the supporting staff to carry out their work effectively. Inadequate administrative office can affect the morale of the workers. The result of inadequacy for staffroom of teaching staff should be looked into. Staffroom is used by teachers to prepare well for their lessons. Gometh, (2009) stated in her study on "Teachers Effectiveness" that teachers as indispensable human resources in the teaching and learning process should be adequately motivated and made comfortable n order to be better placed to teach students effectively and providing well-furnished office is one motivating factor.

Equipments and materials like computers, generators and borehole were also considered inadequate with 30%, 57% and 25% respectively. Toilets, School Vehicles, Art studio, Tuck shop were inadequate. In general, the result reveals that though all the physical resources are available, they were considered inadequate. This finding have supported Nwadiani (2003), He stated that in all levels of education in Nigeria, classrooms, equipment, furniture and other instructional materials are very inadequate to promote effective teaching and learning. The result is also in agreement with Agin (2012), Fadipe (2006), Jiboyewa (1981), and Okoh(1987). They all reported that the entire educational system is replete with problems of educational facilities to facilitate learning. This result agree with findings of Likoko, Mutsotso and Nasongo (2013) in their study "the Adequacy of instructional material and physical facilities and their effect on quality of

teacher preparation in Bungoma county Kenya" reported that most schools had inadequate facilities like classroom(56.1% in adequate) hostels (34.9% in adequate) laboratories (43.1% not available). However, the result of inadequacy disagreed with the earlier report of Yaqub (2005) which indicated that the Federal and State governments have tackled the problems of infrastructural decay in the nation's educational sector through large budgetary allocations to the educational sector within the past decade. The inadequacy of resources in UBE institutions could be attributed to lack of fund or priority attention of the Federal and State Ministries of Education, the Universal Basic Education Commission (UBEC). Ayodele (2000) reported among several reasons that government is unwilling to allocate an increased share of its expenditure to education. Supporting this view, Ibukun (2000) declares that "education in Nigeria is inadequately funded" due to the rising cost of resources for learning, sky-rocketing enrolment of students/pupils and the galloping inflation within the country.

# **Utilization Rate of Physical Resources**

Analyzing the utilization rate of some physical resources in schools from research question 8, the result revealed an optimal utilization of classrooms in thirty-four (34) schools while there is under -utilization in two (2) schools. The result of this study is contrary to that of Ayodele et al (2007) who stated that in southwest geo-political zone, Nigeria public schools, classroom facilities were grossly under-utilized. The GUR for this study ranges from 72% to 98% and this is considered suitable as students/pupils can hardly achieve 100% utilization rate for classroom facility as they cannot be in the classroom from 8am to 2pm daily. The GUR for classroom is 78% in UBE institutions.

For utilization of Basic Science Laboratory, the result reveals over- utilization in Eleven (11) schools while there is optimal utilization in twenty-four (24) schools and there is Under-utilization in one school The GUR for Basic Science Laboratory ranges between 73% and 150%. Over-utilization of physical facilities according to Oyedeji (2000), leads to over-crowding quick deterioration and eventually collapse. Over utilization of facilities

also indicates inadequacy. This finding supported Fafunwa's (1990) statement that Nigerian schools are facing an acute shortage of laboratory and equipment. In general, the result reveals an acute shortage of physical facilities as shortages leads to overutilization. This result supported the findings of Adeyemi and Adu (2010) in their study titled "Enrolment Analysis and the Availability of Physical Facilities for the Universal Basic Education (UBE) Programme in Ekiti State, Nigeria. They reported an acute shortage of physical facilities in the schools and this shows that the schools were not ready for the UBE programme. Musau (2004) looked at optimal utilization of resources in schools in Kisumu district, Kenya. The study revealed that only a few school in the district had above five laboratory rooms (19.35%) since no school can provide adequate teaching service without the use of laboratory, she concluded that lack of laboratory facilities was a major contribution to poor performance of students in Kisumu district as clearly indicated from the result of the study, there is over-utilization of science laboratories as a result of inadequacy, over-stretch of available physical space and facilities due to over-enrolment and inadequacy can lead to quick deterioration and consequently non-achievement of educational goals and objectives.

Althrough, the study has found significant differences in the utilization of classrooms and basic science laboratory; the result reveals that there is a significant difference in the utilization of classrooms in rural and urban UBE institutions. This result is contrary to the findings of Ayodele etal (2007) who discovered that in southwest geo-political zone Nigerian public primary schools, classroom facilities were grossly under-utilized. The result also disagrees with the findings of Okunnamiri (2003) that classroom facilities in selected secondary schools were under-utilized. Results of Basic science laboratory utilization also revealed a significant difference.

#### **CHAPTER FIVE**

#### SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the study, major findings, conclusion, recommendations, contributions to knowledge and suggestions for further studies.

## **Summary of Research**

The study investigated the availability and utilization of human and physical resources in UBE institutions in the Niger- Delta Region of Nigeria. The theoretical framework of this study is based on system resources model of organizational effectiveness by Yutchman and Seashore in (1967)

The researcher examined the availability of human resources in the schools in terms of numbers of teaching staff, qualifications and years of experience of teaching staff in all the UBE institutions in the Niger- Delta Region of Nigeria. While physical resource was examined in terms of availability of physical facilities, materials and equipment. The study sought to find out if the existing educational facilities were adequate and maximally utilized. In determining the utilization of teachers, teacher-students' ratio was examined using the Full-Time Equivalent Teacher-Student Ratio (FETSR) and also average weekly period allocated to each teachers in the school. Teacher-students/pupils ratio. Physical resources utilization was determined by calculating the Time Utilization Rate (TUR), Space Utilization Rate (SUR), and Global Utilization Rate (GUR). To examine these variables, all the UBE institutions in the Niger- Delta Region of Nigeria., including the teachers, and students were involved. Data were collected through checklist designed by the researcher. The data collected were analyzed using the descriptive statistics such as percentage and bar chart. A Non -parametric statistics (Chi-square) was also used to determine the significant differences.

# Findings

Analysis of the results of this study revealed the following findings:

- There are 2548 teaching and 918 non- teaching staff in UBE institutions in the Niger- Delta Region of Nigeria representing 74% and 26% respectively.
- The teachers' qualifications were in accordance with ESA report of 2005 that required that majority of Nigerian secondary and primary school teachers should hold NCE and Bachelor's Degrees in Education.
- 8.1% of teachers in UBE institutions in the Niger- Delta Region of Nigeria have teaching experience of 1-5 years while 91.9% have over 6-20 years of teaching experience. Majority of teachers in UBE institutions were experienced teachers.
- 4. The average weekly period of teachers in UBE institutions is 21.
- 5. A single teacher in UBE institutions in the Niger- Delta Region of Nigeria has 100 students/pupils to cater for while teaching using the full time equivalent teacher –students/pupils ratio (FETSR)
- 6. The categories of physical resources in UBE institutions are facilities, equipment and materials. As all the UBE institutions in the Niger- Delta Region of Nigeria have the necessary physical resources in place.
- 7. There is general inadequacy of physical resources in UBE institutions.
- Classrooms were optimally-utilized while there is over-utilization in Basic Science Laboratory.
- 9. There is a significant difference in the availability and adequacy of human resources (teachers) in rural and urban UBE institutions.
- 10. There is a significant difference in the distribution of teachers by qualification in UBE institutions.

- 11. There is a significant difference in the distribution of teachers by years of experience in rural and urban UBE institutions.
- 12. There is no significant difference in the utilization of teachers in rural and urban UBE institutions using period allocation.
- 13. There is a significant difference in the ratio of teacher to students/pupils in rural and urban UBE institutions in the Niger- Delta Region of Nigeria revealing over population in urban UBE institutions.
- 14. There is a significant difference in the availability and adequacy of physical resources in rural and urban UBE institutions.
- 15. There is a significant difference in the utilization of physical resources of classrooms and Basic Science Laboratory in rural and urban UBE institutions in the Niger- Delta Region of Nigeria.

# Conclusion

The findings from the study have led the researcher to conclude that the availability, adequacy and utilization of resources for the UBE programme in the Niger- Delta Region of Nigeria is very much in doubt because of lack of resources, particularly the infrastructural facilities needed for the programme. The evidence is that the number of resources on ground did not match the number required, particularly for the physical resources. Also the available human and physical resources are unevenly distributed among rural and urban schools in the region, as schools in urban location are favoured than their rural counterparts in the distribution of human and physical resources. From the findings the researcher concludes that not much has been done in achieving basic education in the Niger –Delta Region of Nigeria.

## Recommendations

Based on the findings and conclusion from the study, the following recommendations are made:

- An appraisal of the state of facilities in UBE institutions needs to be embarked upon by the Universal Basic Education Commission (UBEC) and State Universal Basic Education Board (SUBEB). This will give first-hand information on the state of facilities in the schools and provide the basis for a long term planning for physical facilities.
- It is recommended that the Universal Basic Education Commission (UBEC) and State Universal Basic Education Board (SUBEB) should always make an even distribution of teachers to schools irrespective of school location.
- The government should continue to encourage the support of the parents teachers association (PTA), old students association, philanthropists and international bodies like World Bank in improving the school facilities.
- 4. School heads should also ensure proper utilization of the facilities to keep working to minimize a total breakdown.
- 5. Since teachers' efficiency could be greatly impaired by the inadequacy of resources, UBE institutions must be adequately equipped. The science laboratory, libraries, technical workshop and Home Economics laboratory should be well equipped. The provision of computer- based electronic learning resources should be taken seriously to enable teachers to fit into the change in paradigm shift in education from teacher- centered to learner- centered and to prepare the students/pupils to cope with the world of technology.
- 6. The study revealed significant differences in the distribution of human and physical resources in UBE institutions in rural and urban locations. This has led to over-population of urban schools; it is therefore recommended that an even distribution of these facilities be made available to all the schools irrespective of their location.

7. Education data bank should be established in UBE institutions. This will increase the efficiency of educational resources management in other to enable all basic educational institutions carry out their functions more efficiently and effectively.

# **Contributions to Knowledge**

The findings from this study on the Availability and Utilization of Resources in UBE institutions in the Niger- Delta Region of Nigeria, has contributed to knowledge in the following ways:

- 1. The study has established that there are adequate and qualified teachers in UBE institutions in the Niger- Delta Region of Nigeria.
- It has revealed that the average teacher- student ratio in UBE institutions is 1:100, using the Full Time Equivalent Teacher-Student Ratio (FTETSR) which indicates over- utilization of the UBE school teacher.
- 3. It has established that there is a gross inadequacy of physical resources in UBE institutions in the Niger- Delta Region of Nigeria.
- 4. The study has also established that school location influences the availability and utilization of human and physical resources in UBE institutions in the Niger- Delta Region of Nigeria.

**Suggestions for Further Study** 

- The study on Availability and Utilization of Resources in UBE institutions in the Niger- Delta Region of Nigeria can be carried out in other regions or zones of the country.
- 2. This study looked at availability, adequacy and utilization of physical and human resources in UBE institutions; this was not correlated to educational achievement of the students/pupils. It is therefore recommended that this study is carried out looking at the effect on educational achievement of the students and pupils.
- 3. A study can be carried out on maintenance of physical facilities in UBE institutions which this study did not look at.
- A comparative study on the Availability and Utilization of Resources can also be carried out between UBE institutions- government owned Schools and Private Schools in the Niger- Delta Region of Nigeria.

## REFERENCES

Abdul Kareem, A. Y. (2003). An Evaluation of input Resources in Kwara State Primary Schools. *Benin Journal of educational studies*, 3 (4), 1-11

Abdul Kareem, A.Y. (2000). Adequate Provision and Maintenance of instructional Materials and Textbooks for a Successful Implementation of Universal Basic Education programme in Nigeria. Paper presented at the Annual Conference of the National Institute of Educational Planning and, Administration (NIEPA) Ondo May 30-31.

Abdul Kareem, A.Y.(1997). Teachers Education, Perception of ideal teachers. *International Journal of 'Educational Management 2(1), 22-27.* 

Abdullahi, M. O.(1990). Management of science technology and mathematics education in Nigeria in the 90s. *Quarterly Journal of the Federal Ministry of Education* 3(4), 22-26.

Abidogun, B.G (2006). Education Sector Reforms and childhood Education for Rural Development in Nigeria, *International Journal of 'Educational Management 1(2), 12-17* 

Adamaechi, B.C, Romaine H.A (2000). Issues, Problems and Prospect of Free, Compulsory Qualitative Education in Nigeria. Onitsha: Nigerian Educational Publishers Ltd, pp. 11-12

Adaralegbe, A. (1983). Secondary Education in Nigeria: Trends, Progress, Problems and Issues in Adesina S, Akinyemi K. and Ajayi K, (Eds), Nigerian Education; Trends and Issues, IIe Ife: University of Ife Press Limited, pp.16-17

Adaralegbe, A. (2002) Educational Development in Nigeria (1960-1990). Ibadan: Ibukun Printers Ltd.

Adebimpe, O.A (2001). The Place of Library in the accomplishment of Universal Basic Education programme. *Journal of Education and Development*, 1(2), 19-25

Adeboyeje, R.A. (1999). A Practical Approach to Effective Utilization and Maintenance of Physical Facilities in the Secondary Schools. Paper presented at the conference on Educational Planning and Administration in the next Millennium 2<sup>nd</sup> Century, NIEPA Nigeria Ondo: April 27<sup>th</sup> - 28<sup>th</sup> 1999

Adedeji, S.O. (1998), Relationship between Resource Utilization and Academic Performance in Vocational Education in Osun State Secondary Schools. An Unpublished Ph.D thesis, University of Ibadan, Nigeria

Adeniji, I.A (2003). Towards Effective Implementation of Universal Basic Education (UBE) in Nigeria. Contemporary issues in Educational Management. A book of honor. Ibadan: University of Ibandan Press.

Adeogun, A. A. (2001). Economics of Education. Lagos: Olatunji press.

Adeogun, A.A. & Osifila, G.I. (2003). Relationship between Educational Resources and Students' Academic performance in Lagos State, Nigeria in *InternationalJournals of Educational Management*. 5(6), 144-153.

Adepoju, C.A. and Araromi, M.A. (1997). The Effects of infrastructural poverty on the quality of education. *Nigeria Journal on Political Behaviour* 1(2), 64-70.

Adepoju, T.L. (1997): "The Challenges of Primary Education towards Making Vision 2010 a Reality in Nigerian". Paper Presented at the National Conference on Vision 2010 and the Challenges of National Education System, Osun State College of Education, llesha, 25 -27 August.

Adesina, S. (1980). What is Educational Planning? In Adesina, S.(Ed) Introduction to Educational Planning, University of Ife Press Ltd

Adesina, T. O. (2007) Relationship between teacher's utilization and students' performance in Ilorin South LG.A. Unpublished M.Ed Thesis, University of Ilorin.

Adewuyi, D.A. (2002). Comparison between school effectiveness characteristics and classroom instruction strategies in the United States and Nigeria. *African Development* 27(1 & 2), 263-287

Adeyemi .M. (2004). Identifying Individual Teachers' Motivational Needs in Secondary Schools. In *Journal of Educational Management International*, 2(1), 13-18.

Adeyemi, M. Oguntimehin, A. and Soewu. J. (2003). *Developing Functional Literacy For All: A Review of the Implementation Strategies of the Universal Basic Education*. Paper presented at the Hawaii International Conference on Social Sciences Honolulu USA, June 12-15.

Adeyemi, T.O. & Adu, E.T. (2010). Enrollment Analysis and the availability of physical facilities for the Universal Basic Education Programme in Ekiti State Nigeria. *Middle East Journal of Scientific Research*. 5(1), 14-21.

Adeyemi, T.O. (2008). The supply of teachers to secondary schools in Ondo State, Nigeria: A Critical Analysis. *American Eurasian Journal of Scientific Research*. 3(2), 228-240.

Adeyemi, T.O. (2007). Teacher Preparation and Availability for Achieving Basic Education in Ondo State, Nigeria. *Humanity and Social Science Journal*, 2(2), 159-168.

Adeyemi, T.O. (2008). Predicting Students' performance in Senior Secondary Certificate Examinations from Junior Secondary Certificate Examination in Ondo State. Nigeria. *Humanity and Social Science Journal* 3(1), 26-36.

Adeyemi, T.O. (2009) The Effective Management of Primary Schools in Ekiti State, Nigeria; An Analytical Assessment. *Educational Research and Review 4(2)*, 25-56.

Adeyemi, T.O. (2004). The Education Industry in Ondo State, Nigeria: An Evaluation Ado-Ekiti: Green Line Publishers, pp: 53-84.

Adeyinka, A.A. (1992). The Role of Teachers in the society. Ibadan: University Press.

Afolabi, F. O. (2002). The school building and its environment. Implication on the achievement of functional universal basic education programme in Ondo State. In T. Ajayi, J. O. Fadipe, P.K. Ojedele and E. E. Oluchukwu (Eds). *Planning and Administration of Universal Basic Education in Nigeria* (NIEPA).

Agabi, C.O. (2010). Prudential Approach to Resource Management in Nigerian Education: A Theoretical Perspective. *International Journal of Scientific Research in Education*, 3(2), 94-106.

Agbogun, F. T. (1991), Senior secondary student perception of biology practical in florin West Local Government Area of Kwara State. An Unpublished M.Ed Thesis, University of Ilorin

Aghenta, J. A. (1984) Towards a system approach to the planning of secondary education in Nigeria" in *secondary education in Nigeria*, Adesina, S. (Ed) Ile-Ife: University of Ife Press Ltd. P. 29.

Aghenta, J.A (1995). Improving teachers Education in Nigeria, Ibadan: Kraft's Books Ltd.

Aghenta, J.A (2000). Organization and Management of Universal Basic Education in Nigeria. A paper presented at the 15<sup>th</sup> Annual Academy Congress Publication 2000 of the Nigerian Academy of Education held in UNIBEN, pp. 5-7.

Aghenta, J.A. (1998). "Teacher Recruitment and Retention: Issues and Problems in Teachers and Teaching in Nigeria: Issues, Challenges and Prospects in N.A, Nwagwu (Ed.), The Nigerian Academy of Education Yearbook, No. 2, 44.

Aghenta, J.A. (2001). Educational Planning: A turning point in education and development in Nigeria. Inaugural lecture series, 58. Benin City: University of Benin

Agih. A.A (2012) Imperative for the availability of adequate resources for the administration of secondary education towards meeting the challenges of vision 2020 in Bayelsa State in Nworgu B,G & Buseri J.C Human (Eds) Human Capacity development for vision 20-20.The Nigerian Academy of Education, Proceeding of the 25<sup>th</sup> annual congress of the Nigerian Academy of Education.

Ahmed, U.B. (1999). Mass Failure will continue until... Nigeria Tribune, Thursday 25 Nov.

Aiherobolana, J.E.V. (2005). A comparative study of manpower and physical facilities in primary and secondary schools in Delta State, Unpublished M.Ed Dissertation, Delta State University, Abraka

Aiyepeku, T.F. (1989). 6-3-3-4 System of Education in Nigeria. Lagos: NFS Educational Publishing

Ajayi, A.A. (2000). Fundamental of Educational Management Ado-Ekiti: Greenline Publishers.

Ajayi, A.O & Akmwumjju, J.A. (1996). Personnel Performance and Capacity Building. Ibadan, Nigeria.

Ajayi, K. (2001). Towards Reversing Dwindling Enrolment Trend in Public Primary Schools in Ijebu-North Local Government Area of Ogun State. In Adenuga, A. (Ed) Reversing Dwindling Enrolment Trend in Public Primary Schools in Ogun State. Lagos: Elegant Publisher.

Akande, O.M. (1985). Hints on Teaching Practice and General Principles of Education. Lagos: OSKO Associates,

Akhaine S. (2001). Procedure 30,000 teachers yearly Government Mandate NTI. The Guardian October 25, pp. 38.

Akinkugbe, O.O. (1994). Nigeria and Education: The Challenges Ahead. Ibadan: INTEC. Printers Ltd,

Akinleye, G, A. (2001) Early childhood education: Guide for parents and teachers UNAD Journal of Education' 2: (1), 45-51

Akinsanya O.O. (2008). Differential distribution and utilization of human and material resources on academic performance in secondary school in Ogun state. *African Journal for the Study of Educational Issues (AJEDUI)* 4(4), 34-39

Akinsolu A. O. (1999). Teachers and students academic performance in Nigeria secondary schools: Implication for planning. *Florida Journal of Educational Administration and Policy'3* (2), 86-100.

Akinsolu A. O. (2011). Teachers' utilization in Ondo state public secondary school in Nigeria: Some planning implications. *Journal of Emerging Trends in Educational Research and Policy Studies* (JETERAPS) 2(4), 275-283

Akinsolu, A.O. (2012). Resource Utilization and Internal Efficiency in Nigerian Secondary Schools: Implication for Social Problems of Education. *International Journals of sociology and Anthropology*. 4(1), 23-30

Akintayo M.O. (1997). Primary school Facilities, Materials, Utilization and Improvement in A.O.Ajayi and B, Sokan (eds), Effective Management of Primary Education. University of Ife Press Ltd

Akintola, M.O. (1997) Primary school Facilities, Materials, Utilization and Improvement in A.O. Ajayi and B, Sokan (Eds), Effective Management of Primary Education.

Akinwumiju, J.A. (2003). Educational planning, statistics and models Ibadan: External Studies Programmes Series, Faculty of Education, University of Ibadan, pp.17-41.

Akubue, A.V. (1991). Classroom Organization and Management: A five point strategy, Ibadan: Wisdom Publisher Ltd.

Alabi, A.T. (2003). Decision making in schools in Ogunsanju, S. and Durosaro, D.O. (Eds) The Craft of Educational Management. Ilorin: Indemac printing media.

Aluede, R.O (2006). Universal Basic Education in Nigeria: Matters Arising. *Journal of Humanity and Ecology*, 20 (2), 97-101.

American Association of School Administrators (1967). Schools for America New York, A.A.S.A.

Amoo, A. 0. (1983). The demand and supply of teachers of secondary schools: A case study of Osogbo local government area 1981/1982. Unpublished M.Ed dissertation, University of Ibadan

Anderson, G (1998). Fundamentals of Educational Research. London: Macmillan Publishers

Annual Report, (2004). Universal Basic Education Commission (UBEC), Abuja: Government.

Annual Report, (2005). Universal Basic Education Commission (UBEC, .Abuja: Government.

Anyaegbu, .R, Christman, D.E, Jingpu, C. (2004). The Challenges of Rural Education in Nigeria: Potential lessons from China *E-J. Teach, Learn, Diverse setting; 1(2), 160 - 174.* 

Arubayi, E.A. (2003). Correlates of Selected Extrinsic Variables with students' Academic Performance in Science. *OSU Journal of Educational Studies*, 2(3), 10-14.

Ashworath, A. (1994). Secondary Education in Nigeria: Trends, Progress, Problems and Issues in Adesina, .S., Akinyemi K. and Ajayi K, (Eds), *Nigerian Education; Trends and Issues*. lle Ife, University of Ife Press Limited, pp. 16-17.

Asiyai, R.I. (2012). Assessing School Facilities in Pubic Secondary Schools in Delta State, Nigeria An African Research Review. *International Multi-disciplinary Journal, Ethiopia*. 6 (2), 192-205

Awosika, .Y. (2004). Functional Teaching Methodology and Classroom Organization in Secondary School Physical Education. Paper presented at the Conference on Effective Teaching of Physical Education University of Ibadan

Ayodeji, B. & Fabunmi, M. (2004). Managing libraries for effective services in Nigerian schools. Fagamiye, Babalola, Fabunmi, Ayeni (Eds.) Management in Primary and Secondary Education in Nigeria

Ayodele, J.B. & Abiodun, O. (2007) Personnel and physical resource utilization in south West, Nigerian primary schools. *Journal of the Social Sciences 2(4)*, 431-435.

Ayodele, J.B. (2000). School size, class size and teacher quality as correlates of internal efficiency in primary schools in Ondo State. An Unpublished Ph.D. Thesis, University of Ibadan, Nigeria.

Ayodele, S.O. (1988). A study of the Relative Effects of the Problems of Class Sizes and Location of Schools on Performance of Pupils. *In Nigerian Journal of Curriculum Studies*, 4(2), 56-61

Babayomi, A.O. (1999). Comparative study of the teaching and learning resources in public and private secondary schools in Lagos State. Unpublished M.Ed Dissertation, in University of Lagos.

Bada, A.O. (2011). Educational resources and students' academic performance in Ondo West Local Government Area of Ondo State. An Unpublished M.Ed thesis Unilorin.

Badejo, D. (1996). *Improving Enrolment and Retention in Nigerian Primary Schools: Roles for* the Media. Paper presented at Workshop organized by Ogun SPEB and Ministry of Education on September 24, 1996 at Abeokuta.

Balogun, T.A. (1982). Improvisation of Science Teaching Equipment. *Journal of the Science Teachers Association*, 20(2), 72-76.

Black, T. R. Atwaru-Okello, D. Kiwanuka, J. Serwadda, D. Birabi, O., Malinga, F., Biumigishu, A., and Rodd, A. (1998). Science education in Uganda: progress and possibilities. *Int. Journal of Science Education* 2(1), 240-249.

Boltan, H.J. (1988). What makes Schooling Effective? A Synthesis and critique of three National Studies of Contemporary Education. *A Journal of Reviews*, 1(1), 22 - 24.

Bookcock, S. S., (1972). An introduction to the sociology of learning. Boston: Houghton Nifflin.

Bourice, B. (1986). Raising school quality in developing countries: what investments Boost learning, Education and Training series. Discussion paper number (EDT) Washington D.C. World Bank.

Bozzomo, O.M (1978). Hints on Teaching Practice and General principles of Education. Lagos: OSKO Associates.

Bullock, A. N. (1997). Making the best decision. Designing for excellence, *Schools in the Middle 17(2), 60-61*.

Butterfield, E. (1999). School Renovation and the Importance of Maintenance: <u>Http://www.vdesignshare.com//research/renovation1.htm</u>.

Chukwuka, C.N. (1980). The Availability and Use of Micro-films for Home Economics instruction in Idemili L.G.A. (Unpublished Thesis) University of Nigeria, Nsukka.

Coombs, P.H. (1968). The World Education Crisis: A system analysis. New York: London Oxford University Press.

Daramola J.O. (1994). A critical appraisal of the role of laboratory practical work in science teaching. *Journal of Curriculum and Instruction*, 4(1 & 2), 56-65.

Dare, M.E, Vail, S.C and Fuller, B. (2008). How Textbooks Affect Achievement in Developing Countries: Evidence from Thailand. *Educational Evaluation and Policy Analysis Winter*, 8(4), 379-392.

Dareng, M.K, Attah, B.G (2000). Trends in Primary Education in Nigeria: Implications for Universal Basic Education sustenance. A paper presented at the 15<sup>th</sup> Annual Academy Congress Publication 2000 of the Nigerian Academy of Education held in UNIBEN, pp. 1-3.

Dolor, T.R /(2002). Evaluating resources for business education programme. in E.A Aromolaran (Ed). Book of reading in business education, 1(1): 126-133.

Duncan, R.B. (1972). Characteristics of Perceived Environmental Uncertainty. Journal of Environmental Science.1 (7), 320-328

Durojaiye, M.O.A. (1978). "Investment in Man". Inaugural Lecture Series: University of Lagos Press.

Durosaro, D.O. (1985). Resource Allocation and Internal Efficiency of Secondary Education in Bendel State, Nigeria. Unpublished PhD, Thesis University of Ibadan.

Durosaro, D.O. (1998). School Plant Management Practice in Nigeria: Trends, Issues and Problems in Oloboye A. A. and Fadipe, J. 0. (Eds.) Management of Nigeria education: Project Monitoring and School Maintenance, Ondo: NIEPA, 53-63.

Earthman,G,I.(2002). School facility conditions and students' academic achievement. Los Angeles: University of California institute for democracy education, <u>www.uncia-idea.org.</u>

Ebenebe R. (2008). UBE and Nine Years Basic Education. Human resources development and utilization at the state level. *African Journal of Educational Foundations*, 4(1), 45 - 47.

Ebong, J. M. (1999). Wastage in manpower utilization in Cross Rivers State secondary schools. *African Journal of Educational Management*, 7(2), 66-72.

Ebong, N. (1999). Refocusing secondary education for relevance and sustainable national development. Knowledge Review 15(4), 20-24.

Eddy, M. and Akpan, A.(2009). *Developing Functional Literacy For All: A Review of the Implementation Strategies of the Universal Basic Education*. Paper presented at the Hawaii International Conference on Social Sciences Honolulu USA, June 12-15.

Edge, J. (1980). "Teaching Writing in Large Classes. ELI Journal 4(2), 146-148.

Edho, O.G (2009). The Challenges Affecting the implementation of the Universal Basic Education in Delta State, Nigeria. *Journal of Social Science*, 20(3), 183-187.

Education For All (EFA), (2000). Assessment: Country reports part III. prospects; http://www.2unesco.org/wef/countryreport3.htmlon line retrieve on 05/01/2006.

Ehimiatalor, E.T. (2001). Education Resources Management: Failure of the Past. Inaugural Lecture, University of Benin.

Ejiogu, A. (1980). Theories of Job Satisfaction and Job Performance: an Overview and Critique Focus on Teaching Profession. Ikeja, Lagos: Joja Educational Research and Publishers Limited.

Eke, L. N. (2003). Education and Culture, Owerri: Sam's Publication Ltd.

Ekundayo, H.T. (2009). A comparative study of availability of physical and instructional facilities in public and private secondary schools in Ekiti State. *Nigerian Journal of Educational productivity and contemporary issues*. 4(1), 285 -292.

Elkhanah, K.E. (1997). Managing school libraries. Resources Problem in Nigeria: *International' Journal of Educational Management*, 2(1), 7-13.

Emetarom, U.C. (2004). Provision and Management of Facilities in Primary Schools in Nigeria: Implication for Policy Formulation. In E.O. fagbemiye, J.B. Babalola et al. Management of Primary and Secondary Education in Nigeria, NAEAP publication.  $f'''_x /\sim x$ 

Emetarom, U.G. (1999). The Decline in Male Enrolment in Post-Primary Schools in Eastern States of Nigeria: Trends and Strategic Management Issues, *ESUT Journal of Education*, 3(3) 320 - 333.

Enoh, A.O, and Okpede E. O (2000). The Meaning, History, Philosophy and Lesson of Universal Basic Education. A paper presented at the 15<sup>th</sup> Annual Academy Congress Publication 2000 of the Nigerian Academy of Education held in UNIBEN, pp. 2-4.

Enueme, P.C (2002). Influence of school Location and Training Experience on primary school Teachers Acceptance of the UNICEF Recommendations for child friendly school' in Refocusing Education in Nigeria (ed) p.3.

Ephraim, Y. and Stanley, E. S (1967): System Resources Theory of Organizational Effectiveness. *American Sociological Review*. 32(6), 201-210.

Fabunmi, J. and Okore, A. (2000). Financial Efficiency and Class Size as Correlates of Students' Academic Performance in Epe Local Government Area of Lagos State ,M.Ed. Project, Ibadan: University of Ibadan.

Fabunmi, M. and Okoro, S. (1997). Differential Allocation of Educational Resources and Secondary School Academic Performance in Edo State, Nigeria. An unpublished Ph.D. Thesis, University of Ibadan.

Fadipe, .O. (2002). Modern Strategies of School Plant Maintenance in Management of Nigerian Education: *Project Monitoring and School Plant Maintenance*. Ondo: NIEPA, 12 (2), 56-62.

Fadipe, J.O (2006) Efficiency indicators for quality control in Nigerian school system, In Fadipe, J.O. & Ojedele P.K (Eds) management of Nigerian Education: Personnel Administration and Quality Education. NIEPA Ondo.

Fafunwa, A. B. (1974). History of education in Nigeria .London: George Allen and Unwin,

Fafunwa, A. B. (1991). A keynote address delivered at the 31<sup>st</sup> Annual science teachers association of Nigeria held at the University of Benin". *Education Today.* 3 (4) 3-6.

Fagbamrye, E.O. (1979). Contextual Effects on Learner characteristics: Determinant of Students Achievement. NIEPA, Ondo.

Farombi, J.G. (1998). Resource Concentration, Utilization and Management as Correlates of Students' Learning outcomes: A study in School Quality in Oyo State. Unpublished Ph.D. Thesis, university of Ibadan.

Farrant, J.S. (1991). Principles and practice of Education (Tenth Impression Singapore Longman.

Fatile,O (2003) Instructional Technology for Liberation of Nigerian rural areas. *Nigerian Educational Review*, 5(1), 102-109

Fayose, P.O.(1995). School libraries resource centers for educational excellence. Ibadan: AENL Educational Publishers.

Federal Republic of Nigeria (2009). *Federal Republic of Nigeria Official Gazette*. 96 (2), 21-24.

Federal Ministry of Education, (1998). National Policy on Education. Lagos, Federal Government press.

Federal Ministry of Education, (2000). National Policy on Education. Lagos, Federal Government press.

Federal Ministry of Education and Youth Development, (2004). Minimum Standards for School Libraries in Nigeria. Lagos, Federal Government Press.

Federal Office of Statistics, (2007). The Nigeria Household 2006, Lagos.

Federal Republic of Nigeria (1998). "National Policy on Education. (3<sup>rd</sup> edition) Lagos: NERDC Press.

Federal Republic of Nigeria (2004). National Policy on Education (4<sup>th</sup> edition). Lagos, NERDC Press.

Federal Republic of Nigeria (2007). National Policy on Education, Lagos: FME/NERDC, p.31.

Federal Republic of Nigeria (2000). Implementation guideline for the Universal Basic Education programme. Abuja, Federal Ministry of Education

Fernandez, E. and Timpane, M. (1995). Improving Primary Education in Developing Countries. New York: Oxford University Press.

George, O.B, (1976). Causes of low Achievement in Geography in WAEC Examinations in Zaria secondary schools. Zaria: Ahmadu Bello University Press.

Gometh, A. M. (2009). Availability, management and maintenance of school building in secondary schools in Delta State. Unpublished Ph.D. Thesis. Delta State University, Abraka.

Gould, D. (2005). School Planning, Management and Maintaining in Our Schools, http://www.special-lite.com.

Graves, B. E. (1993) School Ways: The Planning and designs of American schools. New York: McGraw Hill.

Guthrie, J. W, (2002). Encyclopedia of Education. New York: Macmillan Press.

Hallack, J. (1990). Investing in the Future: Setting Educational Priorities in the Developing World, Paris: ITEP and Pergonion Press.

Harbison, F.H. (1973). Human Resources as the Wealth of Nations, New York: Oxford University Press, 3.

Hornby, A.S.(2000). Advanced learner's dictionary of current English. New York: Oxford University Press.

Ibitoye, S. (2008). Relationship among school mapping, physical resources management and school effectiveness in Ekiti State. Unpublished Ph.D. Thesis, University of Ilorin.

Ibukun, W. 0. (2000) Funding of Primary Education in Nigeria. Journal of the department of Educational Foundations and Management, University of Ado-Ekiti, Nigeria.

Idienumah. M.A. (1987). An Analysis of Efficiency Disparities in Secondary Education Resources Utilization in Bendel State. Unpublished Ph.D. Thesis, Benin: University of Benin.

Ijaiya N. Y. (2000). Falling schools and national development. Time for reappraisal of School effectiveness in Nigeria. *Nigerian Journal of Educational Research*, 2(1), 45-51.

Ijaiya, N. Y. S. & Jekayinfa, A,A. (2009). Public- private partnership initiative and the management of *UBE* Schools, to be or not to be in education reforms in Nigeria: Past, present and future. A.R. Lawal, S.A. Jimoh, S.A. Olorundare, &. N.Y.S. Ijaiya (eds). Publication of the Faculty of Education, University of Ilorin.

Ijaiya, Y. (1997). Teachers Perceptions of Prevalent Behavioural Problems among Secondary School Teachers. *International Journal of Education. Management*, 2(1), 482-495

Ikoya, P.O (2008). Current Issues in Educational Management: Being a Tracing Programme organized by Delta State Universal Basic Education Board for Principals. Vice Principals and Counsellor of Junior Secondary Schools in Educational Management, Abraka. EDSERVE CONSULT, pp. 41-46.

Ikoya, P.O. & Onoyase, D. (2008). Universal Basic Education in Nigeria: Availability of Infrastructures for Effective Programme Implementation. Educational Studies. *International' Journal of Educational Management*, 4(3), 17-23.

Imogia A.O (2000). The Place of Health Education in Nigeria Universal Basle Education En Nigeria; A paper presented at the 15<sup>th</sup> Annual Academy congress publication 2000 of the Nigerian Academy of Education held In UNIBEN, p.24,

Islam, S.K.M (2004). The role of libraries and education. *Information society Today*. 1(1), 32-38

Itedjere, P.O. (2007). History of Education. Benin: Osasu Publishers Ltd.

Jiboyewa, D.A (1981). A theoretical appraisal to leadership effectiveness. *Journal of the Nigerian Educational Research Council, l.(2), 23-29* 

Johnson, A- B. (2000). School Mapping and Resource Supply as correlates of students' Academic Achievement in Kwara State Secondary Schools, Unpublished Ph.D Thesis, University of Ibadan.

Karaiu, A. (1995). Cited in Ngada Audu James "Constraints to the Development of Primary Education in the Arid Zone of Yobe State" (2001) Knowledge Review. 3(1), 45-50.

Kolawole, A. (2000). The Guardian: Universal Basic Education will eradicate illiteracy Lagos., June 1, pp 17.

Koontz, H. and Donnell, C.O. (1976). Management: A Systems and Contingency Analysis of Managerial Functions U.S. A:. Mc Graw-Hill. Inc.

Lassa, P.M. (2000). Teachers production; A focus on Nigeria. The state of education in Nigeria, Abuja: UNESCO, pp. 70-83

liaiya, N.Y.S. (1998). An investigation into problems of teachers' management in Kwara State Secondary Schools. In A. A. Olagboye and A. A. Fadipe (Eds.) *School Plant Maintenance*, Ondo: NIEPA.

London, N.A. (1993). The Impact of Economic Adjustments on Educational Facilities Planning in Trinidad and *Tobago. Educational Management and Administration*, 21(2), 112-120.

Longman, (2006). Dictionary Of Contemporary English (4<sup>th</sup> Ed.) England, Person Education Ltd.

Lukoko Sarah, Matsotso Stanley, Nasogo Joseph (2003): The Adequacy of Instructional Materials and Physical Facilities and their effects on quality of Teachers preparation in emerging private primary teacher training colleges in Bungoma, Kenya. *International journal of Science and Research, India* 2(1). 72-78

Marianhi, T.D. (1979). Efficiency of Education in Education and National Building in the Third World, J. Lowe, N. Grant and T.O. Williams (Eds.) Ibadan, Onibonje Press and Book Industries (Nig.) Ltd.

Marti, D. (1995). Teachers Perspective on Under-Achievement. *Education Today Journal* of the College of Preceptors, 44(4), 75-81.
Matauranga; T.T (1997). Professional Leadership of Secondary Schools Education. *The Education Review Office, Wellington*, 2 (4), 11-17

Matthew, C., Carrl, O. and Hudson, M. (2001). Graduate Teachers in Rural and Remote S.A. Schools, A Year Book of First South Australian Chapter, the Australian College of Education.

Mbikpo, O. (2000) Educational Administration and Planning, Calabar: University of Calabar Press.

McDaniel, E.D. (1963). Input - output Analysis in Nigerian secondary school system, Lagos Educational Review: *A Journal of Studies in Education*, 2(1), 67-71.

Mkpa M.A (2000). School Staff Development Strategies for Effective Universal Basic Education (UBE) Curriculum Delivery: Lessons from the Nigerian Community Education programme. A paper presented at the 15<sup>th</sup> Annual Academy Congress Publication 2000 of the Nigerian Academy of Education held in UNIBEN, p. 13.

Murillo, F. O. and Roman, M. (2011). School Infrastructure and Resources do matter: Analysis of the Incidence of School Resource on the Performance of Latin American Students: Effectiveness and School Improvement: *International Journal of Research*, *Policy and Practice 22 (1) 29-50*.

Nakpodia, E.D (2011). "Teacher Factor in the implementation of Universal Basic Education Scheme in Central Senatorial District of Delta State". -Res. *Educ.*, 17(1), 63-71.

Nchor, A. N. (1998). Instructional materials and resources in Nigerian Secondary Schools: Problems and prospects. *Akampa Journal of Education*, 2(3), 37-42.

Ndiomu C.B (1992). Human resources development and utilization in the Nigerian armed forces. In. Yahaya A.D, Akinyely, A. (Eds). Human resources development and utilization: policies and issues. Badagry: ASCON.

Newhouse, O.B. and Beegle, K. (2006). The Effect of school type on Academic Achievement: Evidence from Indonesia. *Journal of Human Resources, 4 (3), 22-27.* 

Newton, O. (2002). *Quality assurance control*. London: Connection.

Ngurukwem, E.C (2005). Refocusing Teacher's Education for Sustainable Development: A Case for Continuous Teacher Development Programmes. *International Journal of Research, Policy and Practice 12 (1) 19-25.* 

Nigeria Educational Research Council (1980): Perspective of the Quantities and Qualities in Nigeria Education: A Synthetic Report of the Baguada Seminar Sept 1980.

Nmadu, T.M. (1998). Human resources management, An introduction. Jos: Jofegan Associates.

Nwadiani, M. (2003). The school manager in Nwadiani, (ed.), *Aspects of educational planning and administration*. Benin City: Nigerian society for educational planning (NSEP) in Collaboration with Monose Amalgamates.

Nwadiani, M. (1992). 'An Assessment of learning Environment in Nigeria; Consultancy Report<sup>1</sup> Lagos: FME/UNESCO.

Nwadiani, M. (2004). The school manager in Nwadiani, (ed.), Aspects of educational planning and administration. Benin City: Nigerian society for educational planning (NSEP) in Collaboration with Monose Amalgamates.

Nwagwu, N.A. (1998). "Teachers' Militancy, Productivity and Standards in Education Today and in the Future" in Prospects N.A. Nwagwu (Ed.) The Nigerian Academy of Education Yearbook 1(2), 18-24.

Nwangwu C.C (2000). Managing the challenges of the Compulsory schooling Aspect of the Universal Basic Education programme. A paper presented at the 15<sup>th</sup> Annual Academy Congress Publication 2000 of the Nigerian Academy of Education held in UNIBEN, p. 14

Nwankwo, I.I, (1979). Toward a system approach to educational management in Nigeria: Implications for Research (Mimeograph), Faculty of Education, University of Ibadan

Obasanjo O (1999). The Guardian Education: A National Priority Lagos, October 13, pp.49.

Odden, A and Archibong, N. (2002) How Schools Can Re-allocate Resources to boast Student Achievement, Benin: Urwin Press

Odo, C.O (2000). Towards Enhancing the success of the Universal Basic Education (Universal Basic Education) scheme: The school Administrator's Role. A paper Presented at the 15<sup>th</sup> Annual Academy congress publication 2000 of the Nigerian Academy of Education held in UNIBEN, pp.22.

Ogbuka, C. (2000). The Punch: Gearing up for the Universal Basic Education Lagos. July 25, p.29.

Ogonor B.O. And Sanni, C.A (2004). Maintenance of secondary school facilities in Niger- Delta Region in N.A Nwagwu et.al *Current Issues in Education Management in Nigeria* Benin City. NAEAP (320 - 331)

Ogunleye, O. and Olabisi, A. (1992). "Teachers Clamor for their Reward on Earth. The Guardian Newspaper of Tuesday 22<sup>nd</sup> December pp. 18

Ogunmoyela, K. (2004). Report in The Nigerian Tribune of Friday September 30.

Ogunrinde, A. O.(1999). Socio-economic status as a vital factor influencing academic achievement in Warri Schools. An unpublished M.Ed Dissertation Delta state University Abraka

Ogunsanju, O. (2000). Human Resources Development and Productivity: A lead paper delivered at the conference of the Nigerian association of educational administration and planning. University of Ilorin.

Ogunu, M. (2000). A guide to school effectiveness in Nigeria. Ibadan: Lavilla Publication.

Ogunwole, A.V. (2010). Utilization of school buildings and students' academic performance in Ifelodun local government area secondary schools Kwara State. Unpublished M.Ed. Dissertation, University of Ilorin

Ojedele, P.R. (1998). Maintenance on school plant for educational effectiveness and efficiency in a depressed economy. In Management of Nigerian Education Project; Monitoring and School Plant Maintenance. Ondo: NIEPA.

Ojoawo, A.O. (1989). Effects of Differential Distribution of Resources on Secondary School Performance in WASSCE in Oyo State Secondary Schools (1984-1987). Unpublished Ph.D. Thesis", Ibadan: University of Ibadan.

Ojoawo, A.O. (1990). An Empirical Study of Factors Responsible for poor Academic Performance in secondary Schools in Oyo State. *AJEM*, 4 (1&2), 140-148.

Okandeji, C, O. (2007). Quality assurance in higher education, In J. B. Babalola, G. O. Akpa, A. D. Ayeni and S. O. Adedeji (Eds) *Access, Equity and Quality in Higher Education*. NAEAP Publications, 477 -485.

Oke, E.B. (2004). School plant utilization, maintenance and school effectiveness in Edo State tertiary institutions. Unpublished Ph.D. Thesis, University of Ilorin

Okeke, B.S. (1997). The school and the community in Okeke, B.S. & Uwazuruke, C.N. (Eds) Introduction to Education Administration. Owerri: Klet-ken publishers Ltd.

Okoh, L.E (1987) . A survey of the teaching Facilities and equipment in Calabar municipal Schools. Unpublished Thesis. University of Port-Harcourt.

Okpede, N. (2000). Formal and informal organization In Nwadiani, (ed.), Aspect of Educational Planning and Administration. Benin City: Nigeria society for educational planning (NSEP) in Collaboration with Monose Amalgamates

Okunamiri, P.O. (2003). Provision and utilization of school facilities in some selected secondary schools in Nigeria. A paper presented at the National Conference of Nigerian

Association for Educational Administration and Planning (NAEAP); University of Ibadan, Ibadan.

Okunnamiri P. 0. (2003). Resources and guidelines for educational financing in tertiary institutions. Owerri: Fastmen Educational and Research Publication.

Ola, I, (199O). The rot I saw at the Education Ministry, Oby Ezekwesili, Daily Sun, Tuesday November, 21.p.17

Olagboye, A.A. (2004). Promoting school plant maintenance culture in Nigeria school system in Management of Nigeria Educational Project monitoring and School Plant Maintenance. Ondo: NIEPA.

Olamiju I. A.and Olujimi T. (2011) Regional analysis of location of public educational facilities in Nigeria: The Akure regional experience. *Journal of Geography and Regional Planning 4 (7) 428-442*.

Olatunbosun, S.A. (2005). Relationship among instructional material, classroom management and students' academic performance in Minna secondary schools. Niger State .Unpublished Ph.D Thesis, university of Ilorin.

Olokoba, A. A. (2002). Teachers' biographic factors as correlates of teachers' productivity. Unpublished M.Ed. Dissertation. University of Ilorin, Ilorin.

Oloyede, D.O. (2003). Resource availability, utilization and academic achievement of students in selected schools in Ibadan. *Journal of Education Studies*. 3(1&2), 40-47.

Olugbenga E.S (1997). Resource, Adequacy and Academic Performance in Ogun State Vocational Secondary Schools. *African Journal of Educational Management*.5(1 & 2), 34-42

Olutola, A. (1982). School planning and Maintenance: Introduction to Educational Planning. S. Adesina (Ed). Ile-Ife University of Ife Ltd,

Olutola, A.D. (1998). Educational facilities and students' performance in West African school certificate examinations. *International Journal of Educational Management 4(2)*, 17-24.

Omojuwa, R.A. (1993). Direction of Adult Literacy Programming in Nigeria, Literacy and Reading in Nigeria Reading Association of Nigeria.

Oni, J 0. (1995). Educational Resources: An Introduction, Abeokuta: Gbemi Sodipo Press Ltd.

Oni, J O. (2008). Educational Resources: An Introduction, Abeokuta: Gbemi Sodipo Press Ltd.

Oni, J.O. (2006). Resources and Resource Utilization as Correlates of School Academic Performance. Unpublished Ph.D Thesis, University of Ibadan.

Onipede, H. (2003). National Development Hinges on Quality Education. *The Comet,* Thursday 2<sup>nd</sup> June, Pp.21.

Onoyase, D. (1991). Theory and practice of educational administration 2<sup>nd</sup> edition 2007, Warri: Johnny & Co. Publisher.

Opara, P. N. (2007). Functional Literacy in Technical and Vocational Education. *Journal of Applied Literacy and Reading*, 3(1), 60-65.

Osifo, I.A (2002). Extent of resources adequacy for the implementation of UBE in Anambra State primary schools. A paper presented at the 1<sup>st</sup> annual conference of the Faculty of Education, Nnamdi Azikiwe University, Awka.

Over-baugh, C.E. (1990). The State of Growth in Educational Systems. In S.P Heinemann and D.S. White (Eds). *Education and Economic Development Washington*, *D. C.* The World Banks, pp.37-44

Owoeye, J.O & Yara, P.O. (2011). School facilities and academic achievement of secondary school students in Ekiti State, Nigeria. *Asian Journal of Social Science?* 3(7), 64-74.

Owolabi, J. (2007). Introduction to School Mapping. Mimeograph, Educational Planning Services. The Punch, 2006. Poor School Enrolment, pp: 16.

Owolabi, S.O. (2007). *Teacher education in Sub-Saharan Africa: Policies and practices*. A paper presented at the development of teacher education in Africa conference Makarere University, Kampala, Uganda .

Oyebode, K. (2006). Economics for senior secondary schools. Ibadan: Dokun Publishing House.

Oyedeji, N. B. (2000). The role of school plant in educational productivity.in Fagbaiye, E.O., Durosaro, D.O. (Eds.), Education and Productivity for Educational Administration and Planning , University of Ilorin.

Oyesola, G.O. (2000). Physical facilities and productivity in Education, in Fagbamiye, E. O. and Durosaro, D. O. (Eds.) Education and Productivity for Educational Administration and Planning, University of Ilorin.

Peretomode V.F. (2007). Introduction to the Teaching Profession in Nigeria. Owerri: Totan Publishers Ltd.

Peretomode V.F. (2001). Educational Administration Applied Concepts and Theoretical Perspective, Lagos: Joja Educational Research and Publishers Ltd.

Peretomode, V.F. and Peretomode, O. (2001). Human resources Management. Lagos: Obaroh and Ogbinaka Publishers.

Rao, B. (2001). Science Education in Asia and the Pacific, New Delhi: Discovering Publishing House

Rao, B.D, Stoodt, B. D. and Burns, P. C. (1987). Grouping for Motivation and Differentiated Assignment Secondary School Reading Institution. The Content Area 3<sup>rd</sup> Ed. New Jersey: Houghton Mifflin Company.

Rice, J. K. (2003). Teacher Quality: Understanding the Effectiveness of Teacher Attributes. Washington, D.C: Economic Policy Institute.

Richard, J. M.,. and Barbara, R. P. (2002). Learning by Doing, Vintage and Selection: Three Pieces of the puzzle relating to teaching experience and teaching performance. Economics of Education Review, (1) 4, 453-465.

Roach, K. A.(1995). A draft report on time tabling scheduling in secondary schools.

Robinson, G.E. (1990). 'Synthesis of Research on Effects of Class size. *Educational Leadership*, 47(7), 80-90

Ruggai, T. R. and Agih, A. A. (2008) Experience and qualification as correlates of teacher job performance in secondary schools in Bayelsa State. *African Journal of Education Research and Development 2 (1), 87-94* 

Samuel, T. (1996). "Teacher Education in Lagos State" A proposal for the 21<sup>st</sup> Century. *The BEAGLE*, 1(2), 48-62.

Smith, M.L. and Glass, G. V. (1980). "Meta-analysis of Research on Class size and its Relationship to attitude and instruction." *America Educational Research Journal*, 1(1), 2-16.

Sureiman, O. (2010). Determinants of Academic Performance in Public Day Secondary Schools, Manga District, Kenya, *Journal of Technology and Education in Nigeria*. 5(1), 13-17

Taiwo, C.O. (1980). "The Nigerian Educational System: Past, Present and Future. Nigeria: Thomas Nelson.

Taiwo, C.O.(1985). The Nigerian Education System: Past, Present and Future. Lagos: Thomas Nelson (Nigeria) Ltd.

Tamir, P. (1973). Research on teaching in the natural sciences in R.M., Travers (Ed.) Second Handbook of Research on Teaching. Chicago: Rand McNally.

Tijani A.A. (2011). Supply and utilization of teachers and students academic performance in Kivara state secondary schools. Unpublished Ph.D thesis University of Ilorin.

Tijani, A.A. (2004). Relationship between in-Service training and school Effectiveness in private schools in Kwara State, Unpublished M.Ed Thesis University of Ilorin.

Ukeje B. O. (1992). Educational Administration. Fourth (Ed.) Enugu: Dimension Publishers Ltd.

UNESCO (2003). Ministerial round table on quality education.

UNESCO, (2000). The State of Education in Nigeria. Lagos: UNESCO. Universal Basic Education Programme UBE, (2003). Annual Report.

Uwameiye R., and Osunde A.U (2000). Illuminative Assessment of Pre-vocational Education<sup> $\wedge$ </sup> within the context of Universal Basic Education. A paper Presented at the 15<sup>th</sup> Annual Academy congress publication 2000 of the Nigerian Academy of Education held in UNIBEN<sub>7</sub> p. 13.

Uwheraka, T. (2005). Analysis of Space Dimensions and Physical Facilities in Senior Public Secondary Schools. Unpublished M.Ed Dissertation, Delta State University Abraka.

Wilcockson, D. (1994). Teachers Perspective on Under-Achievement. *Education Today* Journal of the College of Perceptors, 4 (2), 4-10.

World Bank, (1990). "Primary Education: A Policy Paper. Washington D.C.

World Bank, (1997). Improving Primary Education in Developing Countries, OUP, U.S.A.

World Bank, (2009). Atlas of global development: a visual guide to the world's greatest challenges (2<sup>nd</sup> Edition). Washington, D.C.: The World Bank.

Yusuf, M. A. & Akinniranye I. (2011). Towards optimal utilization of school facilities in secondary schools. *Journal of Research in National Development 9*(1), 1-7

## Appendix 1: MAP OF NIGERIA SHOWING THE STUDY AREA



### MAP OF NIGERIA SHOWING THE NIGER- DELTA REGION

#### **Appendix 2: CHECKLIST**

### DELTA STATE UNIVERSITY, ABRAKA

# DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND POLICY STUDIES

# QUESTIONNAIRE ON THE AVAILABILITY AND UTILIZATION OF RESOURCES

**Information:** This instrument was designed to assess the resources availability and utilization rate in UBE institutions in the Niger- Delta Region of Nigeria. It is strictly for academic purpose and all responses will be treated as confidential.

**Instruction:** Please respond to every item. Carefully read through the questions and respond appropriately to each statement.

#### **SECTION "A"- Background Information**

Name	of	School:
State:		
School Category: JSS ( ), Primary ( )		
Location: Urban (), Rural ()		
Gender: Male ( ) Female ( )		
No. of teachers in the School:		
No. of Non-teaching staff in the School:		

### SECTION 'B'- Items on Human Resources Availability and Utilization

1. Please indicate the number of teachers in relation to qualification, sex and experience.

S/N	QUALIFICATIONS	GEN	DER	TOTAL	YEARS OF EXPERIENC			IENCE	
		Μ	F		1-	5-	10-	15-	ABOVE
					5	10	15	20	20
1	NCE								
2	HND								
3	B.Sc.								
4	B.A								
5	B.A (Ed)								
6	B.Ed.								
7	M.Ed.								
8	M.Sc.								
9	Ph.D.								

2. Please indicate the following

SCHOOL TYPE	<b>NO. OF STUDENTS</b>	NO. OF CLASSROOMS				
Junior Secondary School						
JSS 1						
JSS 2						
JSS3						
	Primary School					
Primary 1						
Primary 2						
Primary 3						
Primary 4						
Primary 5						
Primary 6						

3.	Please	indicate	the t	follow	ing	for	vour	school:	
					$\omega$		2		

S/N	SUBJECTS	NO.	NO. OF	<b>NO. OF PERIODS</b>
		OF	TEACHERS	PER WEEK

		STUDENTS	
1	English Language		
2	Math./ Arithmetic		
3	Basic Science		
4	Agricultural Science		
5	C.R.S/ Bible		
	Knowledge		
6	Civic Education		
7	Basic Technology		
8	Social Studies		
9	Computer Science		
10	Home Economics		
11	French		
12	Cultural & Creative		
	Art		
13	P.H.E		
14	Business Studies		

4. <u>How many of the following non- teaching staff do you have in your school?</u>

1	Messenger	
2	Account officer	
3	Cooks	
4	Administrative staff	
5	Drivers	
6	Cleaners	
7	Gardeners	
8	Laboratory attendant	
9	Nurses	
10	Catering officer	
11	Librarian	

S/N	" A "	AVAILABLE	NOT	NO.	LEVEL OF
	FACLITIES		AVAILABLE	NEEDED	UTILIZATION
1	Classrooms				
2	Libraries				
3	Basic Sci. Lab.				
4	Basic Tech.				
	Lab.				
5	Home Econ.				
	Lab.				
6	Assembly Hall				
7	Admin. Office				
8	Tuck shop				
9	Art studio				
10	Staffroom				
11	Computer				
	center				
12	Toilet				
	" <b>B</b> "				
	EQUIPMENT				
13	School Vehicles				
14	Computers				
	"C"				
	MATERIALS				
15	Classroom				
	furniture				
16	Teachers chairs				
17	Bole-Hole				
18	Generators				