

**DATA MANAGEMENT PRACTICES OF SECONDARY
SCHOOL ADMINISTRATORS IN NSUKKA EDUCATION
ZONE OF ENUGU STATE**

BY

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**DEPARTMENT OF EDUCATIONAL FOUNDATIONS
UNIVERSITY OF NIGERIA, NSUKKA**

AUGUST, 2013

TITLE PAGE

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**AUGUST, 2013
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DEDICATION

This work is dedicated to my lovely wife Mrs Maryann Ukamaka Ezeagu, Chinwekene my daughter and father late Ezike Ezeagu and late Ignatus Ezeagu mother Mrs Aneja Ezeagu for their encouragements.

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the functions up to the end of the programme. May glory adoration and honour be to His holy name, Amen.

Ezeagu Mark NNadiukwu
July, 2013

Abstract

This study was designed to investigate data management practices of secondary school administrators in Nsukka Education Zone of Enugu State. The study employed descriptive survey research design. The population comprised 58 principals and 2004 teachers. The entire population of the principals were used and 2004 teachers were sampled for the study using multistage sampling technique. Three research questions were used to guide the study. The instrument used for data collection was questionnaire. The instruments consisted of twenty two (22) items questionnaires titled Data Management Questionnaire. The instrument was analyzed using mean and standard deviation for the research questions. The results of the data analysis revealed that the major ways adopted by the school administrators in management of data include use of computer, CD Rom, Microfilm, microfiche, flash disc, test scores and questionnaire. Constraints to data management include requisite knowledge of managing data, lack of data storage, epileptic power supply and inadequate fund etc. Moreso, strategies that could be employed to enhance the utilization of data include refresher courses, administrators should be computer literate, equipment for storage and retrieval should made available etc. Based on the above findings a number of recommendations were made that: Administrators should be trained on the aspect of managing data like filling. All the departments and units in our schools and board should avoid inflation of data. There should be a laid down rule on how data should be collected, stored and managed to ensure its management.

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CHAPTER ONE

INTRODUCTION

Background of the Study

Before 1970, voluntary agencies and the missions had the upper hand in the control and management of education in Nigeria. As soon as the Nigerian Biafran Civil War ended in 1970, the government of then East Central State was anxious that schools in the war devastated parts of the country should quickly become functional and went ahead to enact the Public Education Edict of 1970. By this edict, government took over the control and supervision of all schools within the state. According to Okonkwo, (2003:19), the Edict, among other things defined the terms for:

Setting up state schools management boards for the purpose of managing primary and post primary schools; the relationship between the Ministry of Education (solely responsible for planning, supervision, evaluation and control) and the new school boards; the management of schools with regard to issues of systems, structure, types of schools, teachers, curriculum, inspections among others .

The secondary Education Board recently called Post Primary School Management Board is a corporate body established by the public Education Edict of 1970. It is the aim of the Ministry of

Education which has statutory functions of achieving the national objectives of education through data management.

In recent years, educational development in Nigeria has witnessed a lot of set backs due to non-availability of data or lack of authenticity where available, (Eze, 2009). According to Durosaro (2008) data are numerical measures of phenomenon and they are used in the process of scientific decision-making. The planning and management of any nation's educational system depends steadily on the quality of data collection, analysis and storage and retrieval. Data are of vital importance in the effective administration of schools as it shows the programmes, activities and history of a school from year to year. From data kept in a school, all vital information concerning the principal, teachers, non-teaching staff and students, both past and present can be retrieved. According to Bosah (2006), data that are kept by the Post Primary Schools' Management Board (PPSMB) include data in relation to staff population, qualification, ranks and promotion, data generated in relation to staff verification exercise, student enrolment, population data in relation to payroll voucher such as name of staff, present salary grade level, amount to be paid in cash and signature or comment by the principal and data in relation to inspection and supervision.

Data is the raw material that is processed into finished information products. Data must be processed into meaningful information to be useful to any organization. Agbo (2008), referred to data as documents that are kept in schools which directly or indirectly facilitate the process of school management, teaching and learning. Apart from contributing immensely towards proper performance of the various functions in the school system, appropriate data help school personnel to understand the complex nature of man because it helps school administrators to monitor the behaviour of students in the school. Through appropriate data, prospective employers often gather information on the background, nature, activities and achievement of applicants. If a student seeks transfer from one school to another, school data are needed to determine whether or not the school to which he seeks transfer should accept him. Accurate data is a crucial factor in the successful planning of the financial, physical and human resources in the school system by Ministry of Education and other relevant agencies (Binuyo, 2004).

For effective school administration, information about students, staff members, curriculum instructional facilities, equipment supplies and finances are collected regularly in the schools through data. Statistics, based on school data and report

are needed at all levels- local, state, national and even internationally by agencies constituted by law, organizations and individuals interested in the schools or involved in decision-making affecting the schools. Furthermore, categories of students' information used in planning and evaluation of instructional programmes include family and residence information; physical health information; behavioural and psychological information; school performance information and non-school information (Ozoemalam, 2005).

Data are of value to administrators in the management information required for scheduling students into classes and courses to be taken as entrance qualification, subject. Data of students' aptitudes and performance in courses completed and recommendation. Data is also used for students requests for course type (full-time or part time) and the medium of instruction (direct students-teacher interaction, television, correspondence, radio or self teaching materials) are all of value to administrators. However, management is another unit of this research study has been described in variety of ways. According to Thieranf in Agbo (2006) management is the process of allocating and organizational input (human and material resources) by planning, organizing, directing and controlling with the purpose of producing outputs (goods and

services) desired by its customers so that organization objectives are accomplished. Also Nwachukwu in Enyi (2004) refer to it as a group of people. This group sees management as a group or team of individuals in an organization. There are others that see management as a process demanding the performance of specific function. Furthermore, management can be seen as a situation where an individual or group sees to the proper utilization of what is entrusted into their hands to achieve a set goal (Ikeyina, 2010). In this study, management can be defined as a group of people that work for the achievement of goals in an organization. This will bring the researcher to the concept of data management as a key issue in this study.

Data management as seen by Olubor (2003) is a key for running any organization including education. Educational administrators at different levels of organization who have the major function of planning, organizing staff, directing and control depend on the type of information supplied to them, its authenticity, richness and quality of the information.

Data management plays an essential role in any growing organization like staffing, placement of students, recruitment which are aided by use of computer. Information technology has generated advanced tools for analyzing and managing data. Use of

those tools like computer diskette, microfilm, and microfiche, CD-Roms, DVD, World Wide Web, Flash Disk, among others which can improve the performance of almost any operation. Steps made in capturing mass data electronically have developed the need for effective management strategies.

Data management involves data modeling, data warehousing, data movement, data base administration and data mining. Data modeling is creating a structure for data collection, use and organization in a way that it is easily accessible and efficient for further use or analysis. Data warehousing is storing data effectively so that it can be accessed and used when required. Data movement is the ability to move data from one place to another. For instance, data need to be moved from where it is collected to a data base and then to an end user. This process takes quite a bit of logistic insight. Accurate data management brings about effective school administration in our secondary school system.

Effective school administration refers to the various ways in which human and material resources are utilized to achieve set goals in an organization. It is the process that involves some co-ordinated activities like planning, organizing, co-ordinating, controlling or leading in order to use available resources to achieve a desired outcome in the fastest and most efficient way (Akintunde,

2007). The most efficient way in co-ordinating the activities of others for goal achievement is the use of Information Communication Technology (ICT) (Etesike, 2007). The official administrative work in schools registration of students, maintaining records of students' performance, keeping inventory supplies, printing reports and above all, downloading information for effective decision making can be better done through ICT. A school administrator who has the expert knowledge of the use of ICT can easily update information and coordinate other staff personnel and students' activities for effective administration of the school.

In addition, proper data management by the use of ICT makes it possible for teachers to engage students in self-paced, self-directed problem-based or constructivist learning experiences, and test students. It also helps learning in new, interactive, and engaging ways that may better access deep understanding of content and processes (Freedman 2000). Students in this kind of situation remove themselves from notorious activities such as cultism, drug abuse, examination malpractice and as such make school administration easier and effective (Twining, 2002c).

The school bursar and the school secretary, with the expert knowledge of the computer, keep accurate and retrievable information of students payment of fees, mails and other official

documents of the school in a computer. In school administration, data are used in planning, organizing, coordination evaluation and motivation. Planning is to decide in advanced the objectives to be achieved and how to utilize the available resources in achieving these objectives. Data collected base on the students's enrolment can help the administrator to manage the limited resources available to the school. No administrator can function alone without the assistance of others. Thus, in order to achieve the set educational objectives, the administrator must have a framework or structure for his school on which duties are created and assigned to people based on the data of staff available. A properly organized school reduces the problem of conflicts that normally occur in the school in the course of performing school functions.

Within the school system, the principal and his teachers are expected to carry out a lot of coordinating activities like assigning student to classes, placement of students, sharing of gifts and assigning of lockers/desk, chairs, among others based on data available to the teachers and principal. The principals are expected to see that every teacher is working towards the attainment of school goals without coming into conflict with one another. Odor in Enyi (2004) also pointed out that school administrators should coordinate the planning and implementation of special school

programmes and events, like Foundation or founder's day and other anniversaries, inter-house sports, among others.

Generally, workers come to organizations with expectations that their personal needs will be met by the organization. The extent to which such needs are met, determines the workers' level of motivation and hence their performance and commitment to work. Obi (2003) noted, any organization that has a programme for helping workers to meet their needs is most likely to enjoy workers loyalty, commitment and hard work. Such motivation may come in form of sending teachers for training on ICTs. The need for data management in this respect is very crucial.

Effective school administration employs various ways in which human and material resources are utilized to achieve set goals in an organization. Research carried by Ogboegbulem (2011) has shown that most educational managers at different levels face a great number of problems in their bid to collect, store, retrieve and utilize data for drawing educational plans. It has also been observed by the researcher that in the statistics division of Post Primary Schools' Management Board and even in most of the public schools, there are usually inadequate data concerning some aspects of educational information like students' population and staff population. For example, in Enugu State, there are usually many

problems associated with certain data in the management of schools such as inability to interpret data and lack of storage facilities.

According to Binuyo (2002), such problems include, lack of storage facilities such as computers, shelves, cup boards, file cabinets, file jackets and lockup drawers for data processing, storage, retrieval and utilization. Other factors affecting the management of educational data include ignorance of the need and utility value of data and non utilization of submitted record. In addition, lack of security and poor management of staff files prevent easy access or location of the files. Furthermore, Obi is also of the view that one other problem of data management in the educational system is the issue of wrong information and inaccurate figures which involves both government officials, policy makers and wrong data or information on other stakeholders regarding educational management.

Statement of Problem

Recently, educational development in Nigeria has witnessed a lot of set back due to non-availability of data or lack of authenticity where available. In addition, the inability of school administrators to manage data on the three important correlates of administration namely the man, the job and the materials has greatly affected the

management of schools and achievement of school curricula. It is expected that when school administrators perform vital functions of administration like planning, organizing, directing or controlling, co-ordinating and evaluating activities aimed at achieving the goals of the establishment through adequate management of data, the entire objective of the curricula will no doubt be achieved. The incidence of truancy, non-adherence to school programmes are on the increase on the part of the teachers as a result of poor data management. Social vices of different kinds like cultism, rape, drug abuse, sexual harassment and examination malpractice have equally reached an alarming stage among the students. These are probably as a result of ineffective data management vis-à-vis poor administration. This study therefore set out to find out the constraints to data management practices and strategies that could be employed to ensure adequate data management practices by school administrators.

Purpose of the Study

The general purpose of the study is to find out how data management helps school administrators in effective school administration. Specifically, this study will:

1. Find out the extent to which data management practices are utilized by school administrator.

2. Find out the constraints to data management practices by school administrators.
3. Find out the strategies that could be employed to enhance data management practices by school administrators.

Significance of the Study

The findings of this study have both theoretical and practical significance. The theoretical significance is hinged on systems theory. A systems theory explains the existence of different parts which perform different activities. Many problems facing Nigerian educational system today could be solved through system theory. In Enugu State the same theory could be applied to solve the problems encountered by educational administrators in handling the data meant for them to keep.

The findings of this study will be practically significant in a number of ways to; educational supervisors, principals of schools, data collectors and non-tutorial staff of the board, Ministry of Education, post primary school management board and educational administrators.

The findings of this study will help educational supervisors to see the need for accurate data keeping and management;

The results of the finding will provide principals in secondary schools with the various importance of data management as regards educational planning in the system;

The findings will provide the data collectors at the board with various modern storage facilities such as computer, diskette, flash disc, CD-Rom, microfilm and microfiche;

The result of the study will enable non-tutorial staff of the board to have an insight on the need to save statutory records in the school;

The findings of the study will enable the Enugu State Ministry of Education to take necessary steps in providing alternative ways of storing data for effective performance of their duties;

The result of the study will also help the Post Primary Schools Management Board to make their statistics unit more function.

Finally, the findings of the study will help create awareness on teachers and principals as regards contributing valid information that will help to build up the school system.

Scope of the Study

The study was limited to data management practices of secondary school administrators of Post Primary School Management Nsukka zone of Enugu State (PPSMB).

The content area focused on the following areas of data management practices namely:

Data management practices as utilized by school administrators,

Constraints to data management practices by school administrators,

Strategies that could be employed to enhance data management practices by school administrators.

Research Questions

The following research questions have been posed to guide the study:

1. To what extent are data management practices utilized by school administrators?
2. What are the constraints to the data management practices by school administrators?
3. What are the strategies that could be employed to enhance the utilization of data management practices by school administrators?

CHAPTER TWO

REVIEW OF LITERATURE

This chapter presents the literature reviewed under the following sub-heads:

Conceptual Framework

- Concept of Data
- Concept of Management
- Concept of Data Management Practices
- Problems associated with Data Management Practices
- Concept of Administration
- Concept of Effective School Administration

Theoretical Framework

- System Theory
- Scientific Management Theories
- Human Relations Theory

Review of Empirical Studies

- Problems of Data Management
- Appraisal of record keeping practices
- Assessment of the electronics records
- Problems of Information Management
- Data analysis for decision making

Summary of Literature Review

Concept of Data

Data has been given different definitions by different authors. According to Wikipedia (2008), data refers to a collection of facts usually collected as the result of experience, observation or experiment or processes within a computer system, or a set of premises. This consists of numbers, words or images, particularly as measurement or observation of a set of variables. Data is often viewed as a lowest level of abstraction from which information and knowledge are derived. Data, according to Durosaro (1995) is simply referred to as statistics. He further stated that data are numerical measures of phenomena and they are used in the process of scientific decision making. Data on the other hand are of common occurrence in all disciplines and fields of practice.

Durosaro maintained that the planning and management of any nation's educational system depend greatly on the quality of data collection, analysis and storage. He stated that educational data can easily be classified into two. These are stock data and flow data. The stock data, according to him, refer to the numerical data on educational resource items as they exist at any particular point in time. Examples include number of schools, number of classrooms,

enrolment, number of teachers, number of equipment, quantity of materials, and even fund available to the schools.

Flow data on the other hand, is refers to the numerical value of the movement of human and material resources (teachers, students and other materials) as they flow into, flow through and flow out of the educational system. He observed that it is through this flow that it is possible to generate information concerning new entrants, repeaters, dropouts, withdrawals, and graduates of the educational system. Flow data are useful for analysis of the educational system and for projection of enrolment, teachers, physical facilities and other resource needs. Usually, stock data are expressed in ratio while the flow data are expressed in rates.

According to Burch, Morrison and Reddin in Agbo (2006), data are languages and mathematical symbols which are generally agreed upon to represent people, objects, events and concepts. Information, on the other hand, is the result of modeling, formatting, organizing or converting data in a way that increases the level of knowledge for its recipient. Ousala and Okeke (2006:327) view data as ãa term that means facts of all kinds, such as the date of one's birth, one's school grades, address among others. Operationally, this study defines data as all records kept in the school and post primary schools management board that enhances teaching and

learning. They cover those stored manually or electronically for further use.

Concept of Management

Management is practised at every setting. Management involves planning, controlling and directing people, time, talents, resources and all other activities. According to Idoko (2005), management is a vital link in the existence of any organization, be it a school or an industry. This is because it is that organ which oversees, directs, supervises and controls the realization of the goals of any organization. Management has been defined from various angles depending on the objectives which an organization is set to achieve. Adesina (1990) defines management as the organization and mobilization of all human and material resources in a particular system for the achievement of identifiable objectives in the system. In his own contribution Ogbonnaya (2004) sees management as a process that demands the performance of a specific function. According to him, management is regarded as a profession.

Furthermore, Resser and Modugu in Idoko (2005:1) defined management, ñas the utilization of physical and human resources through cooperative efforts and it is accomplished by performing the function of planning, organizing, directing and controllingò

Management focuses on the entire organization from both short and long term perspectives. According to Skina (2004), management is the process of forming a strategic vision, setting objectives, crafting a strategy and then implementing and executing the strategy. Management therefore is the coordination of all the resources of an organization through the processes of planning, organizing, directing and controlling in order to attain organizational objectives. From these definitions, it could be emphatically stated that management is a process that is used to accomplish organizational goals, that is, a process that is used to achieve what an organization wants to achieve. This study sees management as all the efforts towards seeing that an organization achieves a set of predetermined goals.

Concept of Data Management and Practices

Data management, as the name implies, is a major driving force in the ongoing information technology (IT) revolution. Data management is both a strategy, driven by customer needs and an infrastructure, shaped by technology, for handling and distributing information. It cuts across disciplinary and administrative boundaries (Njoku, 2008). It is also a device designed to store and retrieve data or information as effectively as possible. Data

management according to Jeffery and Richard (2001) is the activity of converting raw facts into information for office use.

Dale and John (1990) looked at data management as the process of looking after the data. It begins with a set of procedures for entering the data into the system and to check, sort, and classify them. To them, the data must be stored in a secure way so as to minimize any chance of physical destruction by accident, by malicious persons, or by the ravages of time. It should not be possible for unauthorized persons to alter the logical content of the data. The form of data should enable their analysis and processing to produce whatever type of information desired. It must be possible to extract, reproduce, transfer, or display the data in a variety of ways. They maintain that data are the raw material from which every information system is built which are gathered and assembled into files. There are lots of definitions of data management but for the purpose of this study, data management can be defined as the effective coordination of people, equipment and procedures together, to sort, analyze, evaluate and distribute needed, timely and accurate data for decision making. It also involves the management and coordination of the total communication process in educational organization.

Data management is essential to all organizations. An organization can hardly survive if its method of gathering and managing data is obsolete. Hence, scholars like Durosaro and Olubor (2003), have emphasized on the need to gather, sort, analyze, and evaluate data accurately and timely for the organization to survive. A system cannot survive if it does not gather, sort, analyze, evaluate and distribute needed, timely and accurate information and communicate same effectively and efficiently to the appropriate channels on the organization for decision making. Data management in this study can be defined as the process by which all the important documents that are used for teaching and learning in the school are properly stored either electronically or manually and retrieved at anytime for use.

Educational planners as we know are into the business of planning/directing educational programmes. The collection and sourcing of relevant data enables them keep abreast with the trend or events in the education sector. Therefore, sources of educational data become necessary. Mgbodile (2007) outlined some of the main sources of educational data as:

- i. Records of the departments responsible for registration of vital events, like Census Board, Electoral Commission and Ministry of Establishment.

- ii. School records, like attendance register
- iii. The records of the ministry of education, school boards, schools, other local school bodies and other government departments involved with education, (planning, research and statistics).
- iv. Special inquiries that deal with pupils and their parents.

According to Adbulrasaq (2008), educational administrators can generate necessary information needed for education from the school records if well kept. This would go a long way in helping them (administrators) create a rich data base for education planning, administration and curricula improvement in the day to day interaction with students.

However, Enyi (1999) also made some contribution on the sources of data and the strategies that could be applied in generating such information. One of the sources highlighted is, public opinion (e.g. parents). Here, information regarding the general attitudes about education and the improvement of their wards are passed. This information is generated through surveys, statements, interviews and newspapers. The second source is through the ministry of finance. The type of information required is budgetary resources available for education. Another are statistic sources. These include population census offices, planning and

statistical units. The information got from this source is mostly demographic and are general data on economic and sociological trends in the society, which can influence educational sector. Finally, among other sources is the educational administrators like principals, education secretaries, chief education officers, PPSMB chairmen, among others.

The information required through these sources are enrolment statistics, needs and problems, wastage and student flow rates, specific local problems and information, teacher needs, buildings, equipment, furniture needs and school finances. All these can be obtained through school and state level data collection, attendance, figures and various school data.

Following the above sources of educational data as articulated by the experts like Mgbodile, Abdulrasaq and Enyi in educational planning, one could attest to the major sources through which statistics and data could be generated for the administration and planning of education in the nation. But the fact still remains that these sources may not provide accurate data for effective planning and administration of educational programmes. This is because the data may be unreliable since politics could play some roles in it. Therefore, the above articulations call for a more refined and scientific way of handling the data and provision of accurate

data so that education could be planned effectively for the actualization of better results, especially in the Post Primary Schools Management Board and beyond.

The collection, processing, analysis, storage, retrieval and utilization of data in the educational system becomes very important to the schools/education managers, for a number of reasons (Durosaro, 2008). The school managers have a responsibility to plan ahead for the system. Educational data are very vital tools for planning. For you to plan adequately for the future, you need the data on what the past was and what the present is like. Also, for the day to day decision making, the educational managers need data to guide their decisions. For instance, to do recruitment of teachers, one needs to have data on the number of teachers available by discipline, age and sex as well as their work load to determine the demand for teachers. This would enable one know his present stock, how well they are utilized and in which area there are shortages.

Furthermore, data collection, processing, retrieval, analysis, storage and utilization enable educational managers identify areas of training and retraining needs. For example, data on students' performance in Mathematics may point to a need to retrain the Mathematics teacher. If such a teacher is an NCE holder, it may be

a pointer for the need to recommend him for in-service training for a degree in Mathematics. The educational system needs to review the curricula in the various subjects. Data collection, analysis and storage is very important in taking this vital decision, on the evaluation and review of curriculum. In addition, data collection, processing, retrieval, storage and utilization is very important in the education system because they aid accountability in the system. Periodically, Inspectors from the Ministry of Education, as well as auditors do visit the schools to monitor how the managers are utilizing the human and material resources. They call for data on these from the school principal. The principal may also be requested to give such account to Parents Teachers Association or School Board of Governors.

It is important to note from the on set that the success or otherwise of any educational system depends, to a large extent, on the availability and usage of essential data with accurate assessment of the education situation in the school and projection of enrolment and teacher/infrastructural requirements. Thus in her submission, Olubor (2003) noted that the success of the nascent Universal Basic Education (UBE) programme is based on availability of accurate data on school age children, teachers, classrooms and other infrastructures required for teaching and

learning in the schools. One needs these data to know the population of school going age in various areas, the number of teachers available and the number required. Data is equally needed to determine the current number and adequacy of classrooms/facilities.

Perhaps, it is the responsibility of educational administrators at the post primary school management board to be familiar with these data, learn how to source for them, update them regularly both for their own use and guidance of education plans. This assertion is based on the belief that data are required for decision making and policy statement. Generally, data management in education is so important that whoever is charged with the responsibility of gathering and/or supplying them should view their roles very seriously. This is because sound educational planning at all levels in any nation starts from proper data management (Obi, 2003).

Accurate data management will facilitate efficient resource allocation and distribution. The administrator with accurate statistics at his disposal will be able to decide on which school, district or zone to assign what number of teachers. He will be able to detect imbalances in the distribution of equipment and can consequently plan to arrest the situation. With proper data management, the

educational administrators or planners at different levels can plan for the future need expansion programmes and in some cases, foresee future threats to the system and workout modalities for tackling such situations well ahead of time.

The importance of data management to the educational system for effective administration can hardly be over emphasized. Hence, the need for accurate and timely educational data is increasingly felt in almost all the developing countries engaged in the task of educational development (Patwari, 1981). The rapid growth of population coupled with aspirations of people for education has put great strain on the educational system and the educational administrators are finding it difficult to cope with limited resources. A nation cannot afford to make plans optimally. So the application of modern data management techniques presupposes an efficient, reliable and up-to-date system. If the data is a few years old, the planning will now refer to the situation of a few years ago and not to the present. Among all these, the first requirement is the availability of adequate basic data which must be collected, analysed and managed in the most efficient manner for planners.

It is glaring to note that quantitative statistical approach is very important for educational planning. According to Durosaro (1997), quantitative data otherwise called statistics relate to figures needed

for practical planning exercise. In the view of Nwankwo (1981), quantitative data relates not only to the educational system but also to other systems related to education. Basically, the information on educational system which can be quantified is data on number of schools, students, teachers and funds. Whereas, qualitative data has been described as information on the objective of education, educational policies, the content of education and other such issues (Olubor, 2003). Similarly, Durosaro opined that qualitative information has to do with information that relates to objectives of education, policies, content and other curricula issues. Therefore, it is important that all necessary effort should be applied to widen and improve the basic statistics used by the educational administrators in Post Primary Schools Management Board. This is the information and computer age, therefore, it is important that all data managers ensure that all information be made available to those in need of it to perform their assignment especially researchers.

Problems Associated with Data Management

Educational administrators at different level face a number of problems in their bid to collect, store, process, retrieve and utilize data for drawing up educational plans. In the statistics division of some educational organizations, according to Mgbodile (2004), there are inaccurate data. For instance, in some local government

areas where there may be about 70 English language teachers, one could find 100 recorded in the files. Also, a school may have a population of about 3,600 students (1,500 boys and 2,100 girls). But the figure in the Ministry of Education may be 1,750 boys and 3,250 girls, totaling 5,000 students. It is therefore pertinent that educational administrators be fed with accurate, authentic and relevant data involving the students' enrolment, staff-student ratio, the number of available facilities and equipment. These data are needed for effective planning and funding of educational programmes.

But in some cases, one would discover that these data are never available and even when they are, at times they are inaccurate and so administrators and chief executives of educational institutions face problems in the planning and administration of educational programmes. These problems are largely caused by the following as outlined by Ogbonnaya in Mgbodile (2004), inadequate finance, ignorance, among others.

This is one of the constraints facing the implementation of educational programmes. In the statistic division or units of some ministries of education, secondary education management boards, and others, one would find inaccurate information. It is also surprising that some secondary school principals do not know the

number of buildings in their schools. Some of them give wrong or inaccurate figures to PPSMB when they visit their schools for facilities up-date.

There have been inadequate financial resources to grapple with educational problems for sometime now. The post primary schools management boards in most states have inadequate funds not only for the payment of staff salaries but also for the procurement of most valuable office equipment such as the data management systems which can help in easy sourcing of data, analysis, processing and retrieval. The tendency of most educational planners to under-estimate the cost of educational programmes and over-estimate the anticipated financial resources to fund the programmes is a major constraint in the area of finance. The failure of our educational planners to anticipate increase in the cost of goods and services in their projections often leads to under-estimation of costs and implementation problems. However, there are other problems identified by Bosah (1997), which include ignorance, non-utilization of submitted records, lack of pace, inadequate data management, lack of security and inadequate transport facilities.

The driving force behind any venture is the knowledge of the need/utility value of the said venture. This knowledge motivates and

sustains the efforts of the operatives in seeing the venture to fruition. Poor data management as presently observed in PPSMB in Enugu State suggests that many educational administrators lack the knowledge of the usefulness of properly kept educational data. Many tutorial and non-tutorial staff that are delegated with the authority and corresponding responsibility of keeping data in the schools and PPSMB do not appear to show that they appreciate the value of the exercise in the complex equation of educational development of the nation. An enlightenment programme for all school personnel and the staff of PPSMB appear imperative. It is true that some records need special skills to be properly managed but the knowledge of what to do will definitely help.

Arbitrary financial allocation to schools which should have been directly propositional to student population and promotion of teachers with poor evaluation score in preference to many with outstanding good performance leave a very serious question mark on how those in authority make important decisions that should have been guided by submitted data. This dampens the spirit of school heads and or educational administrators who believe that decisions should be based on facts and not the rule of thumb. Consequently, record management is dismissed as a tortuous valuable routine. In addition, lack of office space, for files,

cupboards, shelves and file cabinets leave the educational administrators frustrated about where to store valuable data.

Computer and film services are modern facilities devised to facilitate the reduction of record volumes and facilitate the retrieval of data. They also have the added advantage of reducing the space occupied by records kept in files and note books. These important facilities are lacking in PPSMB. Shelves, cupboards, file cabinets, files and note books are equally inadequate in many schools and/or PPSMB. The financing of the board appear so poor that the educational administrators are left frustrated with writing unreplied memoranda to constituted authorities for funds. When replied, school administrators are often advised to ãwait until economy improvesò Nigerian schools and boards obviously need improved financing to meet the huge responsibilities placed on them.

Security is grossly lacking in Nigerian schools and PPSMB. Files disappear from shelves, important documents are pilfered from files. In strange circumstances, records are mysteriously set ablaze to cover one selfish interest or the other or to cover perpetrated fraud. Most of the school boards in Nigeria lack or have insufficient road worthy vehicles to convey data collectors to and from schools in their zones. And record management therefore suffers serious set-back where there is need for input/data runs. Other problems

were also enumerated by Uwazuruike (1991) and Durosaro (2008) as inaccessibility of existing data, shortage of staff/personnel, among others.

High rate of pupil attrition, especially in the rural areas poses a big problem. Children who are enrolled in schools fall-out at will either through illness, sheer lack of interest or ignorance of what schooling holds in store for them in future. Ignorant and poor parents, who cannot pay school fees, withdraw their children from school without as much as telling the school heads. Infrastructure and equipment are destroyed from time to time by bush fire, rain storms, termite and mischievous persons, including students. All these put together, contribute in no small measure to frustrating the effort of the planner at acquiring valid and reliable data.

The section of the educational offices or board charged with the responsibility of collecting education data are often ill staffed. As a result, this affects the volume of work being carried out by them. They do their best but some times, it falls short of the requirements of planning unit.

Considering the above deficiencies encountered by educational administrators in data management, one can easily appreciate the type of constraints which affects the effective data management in schools and PPSMB. This is because with each

constraint, the administrator is faced with the intricate management processes and within each process, there are other numerous and difficult actions and decisions which need to be taken. The net effect is that school administrators are faced with such decision making tasks as ensuring that the huge data available to education are properly collected and utilized it also ensures that the information gap between users of education is bridged, reducing the planning times associated with delays in collecting, processing and retrieving of data it ensures also that the least manpower, equipment and financial resources are used efficiently.

All these suggest that the traditional educational administrator would get lost in the job if not assisted with modern technological devices. Hence, the need for computer- based data collection, processing, storage, retrieval and utilization, even though it has its own limitations.

The problems facing educational administrators in the area of data management/storage are such that people are careless with data. People don't preserve documents, even personal documents such as pay slips, declaration of age, marriage certificates, receipts of payment made on school fees and even certificates are being poorly kept and lost (Durosaro, 2008).

Another problem with data management/storage is that people are not aware of some modern storage facilities such as computer diskette, flash disc, and microfiche. Even where the staff is aware, the schools and/or PPSMB may not be empowered to purchase them. There is also the problem of storage due to faulty cataloguing which makes retrieval difficult.

Finally, the open secret of all the problems mentioned in this study is that most, if not all education departments operate on two or three sets of data. They have accurate or near accurate data meant for internal consumption and the inflated and/or deflated figure for submission to the state or national headquarters based on what they are told the data will be used for. At the end therefore, the planner in the head office nearly always produces plans on the basis of falsified data.

The computer as a modern device for data processing is an important tool to contemporary data management. This is why the computer system is given a lot of priority when discussing data management. A computer is defined as a machine which accepts data from an input device, performs arithmetical and logical operation in accordance with a pre-defined programme and finally transfers the processed data on an output device either for further

processing or in a final printed form such as education documents, schedules and management control reports (Ottih in Agbo, 2006).

Concept of Administration

This has been characterized as an art and as science. According to Nwankwo (1982), those who regard administration as an art believe that administration like art (painting, drawing and sculpture) belongs to those who have the natural gifts, traits or abilities for it. This is a point of view, as Nwankwo puts it holds that only those who have the personality qualities or traits for the practice of administration succeed as administrators. The researcher's concept of administrators in schools are those who develop and implement the educational programmes of the school, procure staff, provide facilities and equipment, keep school records including record of school funds as well as create a conducive teaching and learning atmosphere in schools.

Concept of Effective School Administration

Effective school administration are the various ways in which human and material resources are utilized to achieve set goals in a school. It is the process that involves some co-ordinated activities like planning, organizing, co-ordinating, controlling or leading in order to use available resources to achieve a desired outcome in the fastest and most efficient way (Akintunde, 2007). The most

efficient way in co-ordinating the activities of others for goal achievement is the use of Information Communication Technology (ICT). The official administrative work in schools such as registration of student, maintaining records of students' performance, keeping inventory list of supplies, printing reports and above all downloading information for effective decision making can be better done through ICT. A school administrator who has the expert knowledge of the use of ICT can easily update information and coordinate other staff personnel and students' activities for effective administration of the school.

Theoretical Framework

Systems Theory

The theory was propounded by Talcott Parsons in the year 1902. He was an American sociologist who served in the Faculty of Harvard University from 1927 to 1973.

This theory is based on the notion that all organisms including human organizations as well as educational organization are systems that probably follow the same rules to some extent. By implication, an organization should be studied not merely as a formal arrangement of superiors and subordinates or as a social system in which people influence each other, but as a total system in which the environment, the formal arrangements, the social

system, and the technical systems are all constantly interacting, (Carzor in Unachukwu, 1997:124). Systems as a term have been used to describe the working of almost everything. Consequently, people talk of a car system, a human body system, an electrical system, an educational system, and others. The basic idea here is that the parts of anything are so related and dependent that the interrelationship of any part affects the whole.

Many problems facing the Nigerian educational system today can be resolved through systems analysis. This is possible because there are a number of systems oriented management techniques which have been developed for the physical, biological and social sciences that could be adopted and applied in educational administration. For example, Planning, Programming and Budgeting System (PPBS), Management by Objective (MBO), among others. These techniques which ordinarily involve some mathematical calculations can be used by educational administrators to analyze almost every educational programme in a systematic way. The relevance of this theory to this study is that since decisions or environmental change can influence the entire system, there should be the use of higher mathematics and the computer in solving the problems encountered by educational administrators in the management of data in PPSMB of Enugu State. However, these

techniques which usually involve some mathematical calculations can be used by educational administrators to analyze almost every educational programme in a systematic way.

Scientific Management Theories

This was the earliest administrative theory. It is a kind of theory which emphasized productivity at the expense of the human worker. All actions in this theory were geared towards increasing the productivity of the worker/personnel, for instance, encouraging overtime work and pressurizing people to work harder. Some of the people who contributed in the development of classical management theories include; Henry R. Towne, (1844-1924), Frederick W. Taylor (1856-1917), Henry L. Gantt (1861-1919), Frank B. Gilbreth and Lillian M. Gilbert (1868-1924) and (1878-1925) respectively, Emerson (1835-1931) and Henry Fayol (1841-1925). However, workers were seen only as workers who had no independent decisions about their work. The administrator is seen as the one who had the overall authority and control over his subordinates (T.O. Mgbodile, et al 2004).

Here, the workers' interests and aspirations were completely suppressed, and left outside organizational programmes. According to Nwankwo (1982), the belief was that man can be so managed that he can work as fast and efficiently as a machine. The relevance

of this theory to this present study is that the theory revealed the need for educational administrators at the post primary schools management board to coordinate and introduce the best way by which data could be managed using scientific methods like the computer in collecting, storing, processing and retrieving data for utilization among those incharge of secondary school administration. The theory also shows the need for power to be with the head of Post Primary School Management that should oversee the functions and performance of every staff within the board. This will ensure that every worker/staff in the board puts in his best in order to meet the target goals and objectives. Then it will be followed with effective work motivation to arouse the workers to achieve more results.

Human Relations Theory

The central idea of this theory is that human factor is important in the achievement of organization goals. Thus, it was assumed that workers will achieve better results if their personal welfare is taken into consideration. According to Unachukwu in Ndu, Ocho and Okeke (1997:207) human relations focus on the development of morale and individual satisfaction among workers. Morale here encouraged group cohesiveness and group belonging. Unachukwu went further to say that human relations theory leads to

diffusion of authority which leads to a wider participation in decision making as well as decentralized approach to organization rather than centralization.

The central argument of this theory is that it is only when individuals are treated humanly that they can have the motivation to participate actively in the achievement of organizational goals. This as could be seen, differs from the position of classical management theorists who believed that work can be achieved in an organization at the expense of workers' welfare. With this theory, the focus is on people and how they interact. It is perhaps, believed that the basic problem of any organization whether industry, educational system or even a family is the building and maintenance of good relationship among the various groups in the organization. People who pioneered studies in human relation theories include Mary Packer, Follett (1868-1933) Elton Mayo (1945) Felix Roethlisberger and Dickson (1939) Lewin, Lippit and White 1938 and Yach (1949).

Follett, as a social philosopher was concerned with human problems encountered in organizations, and therefore concluded that such problems can only be minimized when there is cooperation among the workers. She therefore emphasized coordination as the basis of any organizational effectiveness. The

relevance of this theory to data management practices of educational administrators in Enugu State PPSMB can only be solved through good relationship and cooperation among the various bodies and units in the board whose work it is to manage and store data for educational activities. The cooperation among the administrators and workers at the board can bring about the actualization of goals and objectives of the organization. Another relevance of this theory to the study is that school administrators should involve all the members of the board in decision-making so that whatever decision reached as to handle the data issues of the board will be all embracing.

Review of Empirical Studies

This section reviewed available materials or studies on data management which are related to the present study.

Agbo (2006) carried out a study on the problems of data management for educational administration and planning in Ebonyi State Secondary Education System. The researcher employed descriptive survey design in generating its data. The population comprised of all the 600 staff of the secondary education board in Ebonyi State. The instrument for data collection was the questionnaire which was arranged in three parts, 1, 2, and 3 respectively. The data was analyzed using mean and t-test

statistical tool. The results revealed that lack of facilities/equipment such as computer systems, data bank for storage among others are major contributors to ineffective or proper data management for educational administration and planning in Ebonyi State Secondary Education System.

Ogbonnaya (1994) carried out an appraisal on record keeping practices of principals in Abia State Secondary Schools. This study sought to determine the administrative practices adopted by secondary school principals in Abia State in the keeping of school records and the problem associated with keeping of these records. Three research questions and one null hypothesis were formulated to guide the study. Questionnaire was used as the instrument for data collection. The data was analyzed using the mean and standard deviation while the t-test statistical tool was used to test the hypotheses. The findings showed that availability of funds, zeal and interest on the part of the teachers delegated to keep records (data) constitute helps in proper data management by administrators in Abia State Secondary Schools.

Ibezim (2006) carried out a study on the assessment of the electronic records management practices of selected universities in the South Eastern States of Nigeria. The study adopted a survey research design. The population of the study consisted of twenty

two respondents made up of four directors, three system analysts, two computer programmers, one computer engineer and three data administrators/operators of the electronic records management department of the universities. The data was analysed with mean and standard deviation while t-test statistical tool was used to test all the null hypotheses. The major findings of the study were that; not all records are managed electronically in the selected universities and that some strategies and measures used for capturing, maintaining and securing electronic records in the selected universities are not effective.

Okanume (2004) conducted a research on the problems of information management among counselors in secondary schools of Enugu State. The population for the study comprised of all the 100 counselors in the secondary schools in Old Nsukka Education Zone. Questionnaire was used as the instrument for data collection. The study used descriptive survey design for data collection. The data was analyzed using the mean score to compute each unit of the responses in the questionnaire items. The findings showed that there was no significant difference in managing information among experienced and inexperienced, male and female, trained and untrained counselors.

Imboden (1980) carried out a case study of data analysis for decision making on education in developing nations where he discovered that many of the countries even gathered more data than are analyzed or even used in policy making. This, he said occurred partly because the data analysts do not have adequate knowledge of computer technology and are even ignorant of what analysis to do. In most cases, at the school level, people resort to calculators and simplistic estimation.

The above were the only available studies that are related to this present study. Unfortunately, the researcher discovered that very few studies have been carried out on this study despite its importance in educational management. And this created an information gap in effective management of education. However, this study is initiated so that this gap created could be filled.

Summary of Literature Review

Mgbodile (2007), observed that data and its management are very vital in any organization especially in the education sector. It is the determining factor to the success or failure of any educational system towards the realization of set goals. This is why the researcher reviewed the literature for this study under the following sub-headings to help him cover up the necessary areas of this work. They include; concept of data in educational system, concept of

management as well as data management. This was followed by the sources of educational data and importance of data management.

Another aspect of the review was on the problems associated with data management as they relate to data collection, processing storage, retrieval and utilization with particular reference to PPSMB of Enugu State. This was preceded with the measure for improving the problems. In addition, the theoretical framework was discussed. This was carried out under the following; theories of management; scientific/classical management theory; human relations theory, and system theory. Also some relevance of the theories to the present study were highlighted.

Finally, the review of empirical studies indicates that works have not been carried out on the numerous problems confronting educational administrators in Enugu State PPSMB especially as they relate to keeping up-to-date data using appropriate facilities, security of data and mistakes in the analysis of data owing to the cognitive preparations of the data analysts. Also, the review indicates that many research works have been done in various areas of management but not much of such research works were carried out on data management practices of secondary school administrators in Enugu State PPSMB. Hence, the researcher intends to fill the gap created because of lack of valid and reliable data as well as other problems through this research study.

CHAPTER THREE

RESEARCH METHOD

This chapter deals with the research method and various steps that was taken in carrying out the study. It is organized under the following sub-headings; research design, area of study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument as well as methods of data collection and method of data analysis.

Research Design

The study adopted a descriptive survey. The study seeks to establish the opinion of teachers and principals of secondary schools in Nsukka Education Zone of Enugu State on the data management Practices of Secondary School administrator,

Ali (2006) defined descriptive survey as the study which seeks or uses the sample, and data of an investigation to document, describe, and explain what is existent or non existent on the present status of a phenomenon being investigated. The reason for choosing this research design was because it is the most appropriate that could help the researcher to identify the characteristics of the population.

Area of the Study

The study was carried out in Nsukka Education Zone of Enugu State. The education zone consists of three local government areas with these number of public schools; Igbo Etiti- 16, Uzo Uwani, 12 and Nsukka local government, 30 respectively. There is one zonal office in the three local government areas that is responsible for the management of all the secondary schools in the zone. This area was chosen for the study, because it is the zone with the highest number of principals (Statistics Unit, PPSMB Enugu 2011).

Population of the Study

The population of the study will comprise all 58 principals and 2004 teachers serving in Nsukka Education Zone who perform administrative functions such as vice principals, form masters, game masters, head of units (Statistics unit of PPSMB Nsukka Zonal Office)

Sample and Sampling Technique

All the 58 principals and 100 teachers were sampled from 2004 teachers for the study using multistage sampling technique to ensure adequate representation. However, the researcher used 5% percent of the entire population of the teachers. The rationale for selecting 5% of the teachers population is line with the postulation of Nwana (1981) which states that if the population of a study is in a

few hundreds 40% or more sampling will do, if many hundreds a 20% sampling will do, if a few thousand a 10% sampling will do and if several thousand a 5% or less will do.

Instrument for Data Collection

The instrument for data collection is a researcher designed questionnaire titled Data Management Questionnaire (DMQ). It is arranged in two parts. Part one is designed to collect the demographic data of the respondents that is, rank/post as well as working experience Part two of the questionnaire consists of 22 items carefully arranged in three different clusters. Cluster A consists of seven items, eliciting information on data management practices, cluster B consists of eight items eliciting information on constraint to data management and cluster C consists of seven items eliciting information on strategies to enhance utilization of data management respectively. The instrument, Data management questionnaire (DMQ) was developed on a four point rating scale of Very High Extent (4) High Extent (3), Low Extent (2) and Very Low Extent (1) for section/Cluster A. For cluster B and C it is Strongly Agree (SA) Agree (A) Disagree (D) and Strongly Disagree (SD) for sections B and C and the response pattern weighted 4, 3, 2 and 1 points respectively.

Validation of Instrument

The instrument was subjected to face validation by two experts in the field of educational administration and planning in the department of Educational Foundations and one expert in Measurement and Evaluation all in the Faculty of Education, University of Nigeria, Nsukka. These experts were requested to check the adequacy of the items and suitability of the instrument in line with the purpose of the study and research questions. They were also requested to advise the researcher on the suitability of the rating scale to be used. The validates comments helped in drawing the final items of the instrument. Their comments are as follows: validator 1 suggested that item 2 of the questionnaire should be removed, validator 3 suggested that the items of the questionnaire should be meaningfully worded.

Reliability of the Instrument

To determine the internal consistency reliability of the instrument, cronbach alpha was used. The (DMQ) was administered to five principals and ten teachers randomly sampled from schools in Igbo-Eze South Local Government Area of Enugu State. These following co-efficient were obtained for the thee clusters, .781, .779 and .8200 a reliability estimate was computed using cronbach alpha. A correlation co-efficient of 0.84 was obtained for the three

clusters. This value was considered high enough to permit the conclusion that the instrument is reliable.

Method of Data Collection

The researcher used direct delivery technique in the administration of the questionnaire. This implies that the questionnaire was administered personally to the respondents with the help of two research assistants. The researcher traveled to the three local governments in the zone that is Igbo-Etiti, Uzo-Uwani and Nsukka where he administered the Data Management Questionnaire (DMQ) and collects same after they have been filled. The research assistants helped the researcher to get familiar with the respondents so that they will respond to the instrument.

Method of Data Analysis

The responses for each item of research questions were be tallied and weighted. For interpretation of data real limits of numbers was be used in the following order; 3.50 ÷ 4.00 is VHE or SA, 2.50 ÷ 3.49 is HE or A, 1.50 ÷ 2.49 is LE or D and 0.50 -1.49 is VLE or SD. The mean and standard deviation was used to analyze the three research questions.

CHAPTER FOUR

RESULTS

This chapter was presented according to the research questions that guided the study.

Research Question One: To what extent are data management practices utilized by school administrators? To answer this question, mean and standard deviation analysis of the responses of the school administrators were done.

Table 1: Means and Standard deviations of school Administrators's responses on the extent data management practices are utilized by school administrators.

Items	N	Mean	Std. Deviation	Decision
Item 1	158	3.3648	.62055	High Extent
Item 2	158	3.4025	.61746	High Extent
Item 3	158	3.2327	.65791	High Extent
Item 4	158	2.8868	.79541	High Extent
Item 5	158	3.0943	2.35408	High Extent
Item 6	158	2.8553	.80218	High Extent
Item 7	158	2.8113	.88711	High Extent

Table 1 analysis shows that items 1-7 had mean responses of 3.3648, 3.4025, 3.2327, 2.8868, 3.0943, 2.8553 and 2.8113 respectively. The standard deviation of .62055, .61746, .65791,

.79541, .80218 and .88711 for item 1, 2, 3, 4, 6 and 7 show that there is no much variation in the responses of the school administrator with respect to those items. But for item 5 that had a standard deviation of 2.35408, the responses of the school administrator vary so much.

Research Question Two: What are the constraints to the data management practices by school administrators? This question was answered using the mean and standard deviation of school administrators's responses.

Tale 2: Means and standard deviations of school Administrators's responses on the constraints to the data management practices

Items	N	Mean	Std. Deviation
Item 8	158	2.7673	.85828
Item 9	158	3.1132	.72024
Item 10	158	3.1950	.60040
Item 11	158	3.0314	.73279
Item 12	158	2.9811	.79930
Item 13	158	2.8994	.82050
Item 14	158	2.8553	.87030
Item 15	158	2.9748	.84905

The analysis of data shows that item 8-15 had mean ratings of 2.7673, 3.1132, 3.1950, 3.0314, 2.9811, 2.8994, 2.8553 and 2.9748

respectively. Since these means are greater than the bench mark mean of 2.50, it implies that items 8-15 are the constraints to the data management practices by school administrators.

Research Question Three: What are the strategies that could be employed to enhance the utilization of data management practices by school administrators? Mean and standard deviation of school administrators's responses were used to answer the research question.

Table 3: Means and standard deviations of school administrators's responses on strategies

Items	N	Mean	Std. Deviation
Item 16	158	2.9119	.84482
Item 17	158	2.9748	.85647
Item 18	158	2.8931	.82363
Item 19	158	2.8994	.85828
Item 20	158	2.8616	.79139
Item 21	158	2.8239	.88971
Item 22	158	2.8805	.89559

Table 3 reveals that items 16-22 had mean ratings of 2.9119, 2.9748, 2.8931, 2.8994, 2.8616, 2.8239 and 2.8805 respectively. The analysis implies that the mean ratings of these items are greater than 2.50 bench mark mean. This by implication shows that items 16-22 of the questionnaire are the strategies that could be employed to

enhance the utilization of data management practices by school administrators.

Summary of Findings

From the analysis of data, the following were arrived at;

1. The school administrators to a high extent carry out the following data management practices; procurement of computer; training of skilled personnel in filling system; workshops/training on computer operation; processing of data with computer; collection of data by questionnaire, test-scores, interview and observation; storing data in flash, computer and CD for utilization and retrieving data from flash for utilization.
2. Constraints to data management practices of school administrators include; lack of requisite knowledge of managing data; inadequacy of data storage equipment like computers; unavailability/epileptic power supply; inadequate fund, cupboards and filing cabinets used by administrators; non-availability of data bank for storage and retrieval; unavailability of display board and shelves for mounting/displaying important books such as academic journals, reference books, registers, diaries, maps; results of data are sometimes different from the actual data processed.

3. Strategies that could be employed to enhance the utilization of data management practices by school administrators include; organization of refresher courses; administrators should be computer literate; equipment used in processing, storage and retrieval of data should be made available; there should be constant power supply in the administrators's schools; administrators should not be persuaded/cajoled to process and forward falsified data; the keeping of very sensitive records in the school should not be delegated to teachers and data should appear at the appropriate quarters exactly the way they are submitted by the administrators.

CHAPTER FIVE

DISCUSSION OF RESULTS

This chapter includes the discussion of the findings of this study as well as conclusions, implications of the research findings, recommendations, summary, limitations and suggestions for further studies.

Discussion of Results

The discussion is organized under the following sub-headings.

- Data management practices by school administrators
- Constraints to data management practices by school administrators
- Strategies to data could be employed to enhance data management practices by school administrators.

Data management Practices by School Administrators

The result of research question one shows that the teachers and principals in the Post Primary School Management Board Nsukka Zone accepted all the items as data management practices of school administrators. Giving normal official process, computer, skilled personnel workshop on computer, data processing with computer, questionnaire are adopted for data management practices; The find is therefore consistent with the view of Freedman (2000) which outlined

the above as the necessary methods adopted for data management practices in the PPSMB.

- **Constraints to Data Management Practices by School Administrators:** The major findings of the above question revealed that all the items are major constraints facing educational administrators in the state Post Primary School Management Board. However, it implies that, in our schools there are no requisite knowledge of managing data, lack of data storage like computer and also epileptic power supply in most of the schools. According to Binuyo (2002), constraints to data management practices of school administrators include lack of storage facilities such as computer, shelves, cupboard, file cabinet, file jacket, and lock up drawers for data processing, storage, retrieval and utilization. The above problems lead to poor planning because once the administrators don't have places where data are kept those once that will be supplied by the government will be falsify.
- **Strategies that could be employed to enhance data management practices by school Administrators:** The findings of research question three indicates that the items in the instruments are the strategies that could be employed to enhance data managements practices in the PPSMB Nsukka

educational zone. Administrators in Nsukka educational face a lot of problems because refreshers courses and most of them are not computer literate and lack display boards and shelves. According to Etesike (2007), the most efficient way in co-ordinating the activities of others for goal achievement is the use of Information Communication Technology (ICT).

The findings of this study therefore, goes on to confirm the earlier findings of Bosah (1997) which noted that computer and film services are modern facilities devised to facilitate the reduction of record volumes and facilitate the retrieval of data. To this end, it will be obvious to state that computers should be supplied in our schools to enhance data management practices. The mean responses of the administrators implies that the mean ratings are greater than 2.50 bench mark mean. This by implication shows that items 16-22 of the questionnaire are the strategies that could be employed to enhance the utilization of data management practices by school Administrators.

Conclusion

From the results obtained on the investigation into the data management practices of secondary school administrators in Nsukka education zone of Enugu state, the researcher was able to arrive atdraw the following conclusions:

1. That educational data are collected by questionnaire, test scores, interview and observation, research findings, normal official process, school inspection and worker file.
2. That major constraints to data management practices of school administrators include the followings; lack of data storage, requisite knowledge of management data, epileptic power supply, filing cabinets used by administrators, non data banks.
3. That strategies that could be employed to enhance the utilization of data management practices by school administrators are refresher courses, administrators should be computer literate, constant power supply, falsified data should not be supplied, keeping of sensitive records should not be delegated to teachers.

Implications of the Study

This study has a number of implications for education as a whole and post primary school management board in particular. The findings of the study implies that all the items on data management practices of school administrators could be effective. However, the major four items that have the highest scores are items 1, 2, 3, and 5 of both the teachers and principals could be used mainly for data management.

The study revealed that computer is a key object that could be used for data management practices. The implication is that educational administrator should learn how to use computers for proper management of data.

The study has equally shown that there are a lot of constraints facing data management practices. The implication is that school administrators should devise ways of managing data like use of computer, provision of fund by the government to enable administrators purchase storage facilities.

Finally, the study also revealed that most administrators in our schools are not computer literate they do not know how to use computer system, computer diskette, flash disc, CD Rom, refresh course and training of personnel on modern technologies for data storage and retrieval create problem to proper data management practices. The implication is that without adequate storage facilities/equipment for data processing and retrieval, data management will continue to militate against proper management of our education system especially in the PPSMB Nsukka Zone of Enugu State.

Recommendations

On the basis of these findings of the study, the researcher made the following recommendations on the present study. Educational administrators should not rely mainly on research findings or case study for data collection rather other methods should be explored. For instance, normal official process, school inspection, sample surveys, population census.

Administrators should be trained on other aspects of managing data like filing.

- All the departments and units in our schools and board should avoid inflation of data and other irregularities that are penetrated in the system.
- The policy makers at various tiers of government should provide a current manual policy on data management that is self explanatory for the users.
- There should be a laid down rules on how data should be collected stored and managed to ensure its management.
- In order to solve the problems of data management practices, provisions should be made for the supply of adequate equipment and facilities, such facilities should include; computers, computer gargets like CD Rom, flash disc, floppy diskette as well as vehicles.

- Furthermore, in-service training on the modern technologies like the internet as well as workshops, seminars and conferences that will help data managers to carry out their duties. Having qualified personnel to handle data related matters will help in planning of education.

Limitation of the study

The study was constrained in a number of ways. But the obvious limitations include the following:

1. Some staff of the board was not willing to open up and reveal problems areas as such a number of information were obviously held back. This has a little influence in the conclusion drawn from the findings of the study.
2. It took the researcher an extra energy to convince the staffs of PPSMB Nsukka zone of Enugu State that the study was not meant to expose their areas of weakness. It could not therefore be ruled out that the respondents might have faked some of their responses to the questionnaire.

Suggestions for Further Studies

Based on the strength and limitations of the findings of this study, the researcher therefore suggested that for the research work should be carried out in the following areas;

1. A similar study should be carried out on Enugu State Universal Basic Education Board (ESUBEB).
2. Comparative analysis of data management practices on any two states.
3. The impact of using ICT in processing data for educational.

Summary of the Study

This study examined the data management practices of educational administrators in Nsukka Education Zone of Enugu State. According to Binyo (2002) lack of storage facilities such as computer, shelves, cupboard, file cabinet, file jacket and lock up drawers for data processing, storage, retrieval and utilization hinders proper data management. A descriptive survey research design was adopted for the study. Sampling of 58 principals and 100 teachers was used for the study. A structured questionnaire was used for data collection. The reliability coefficient value of 0.84 was obtained using cronbach alpha statistics. Three experts carried out the face validation. Three research questions tested at 2.50 levels guided the study. Mean and standard deviation were employed to answer the research questions. A review of literature and empirical studies were conducted to give the researcher an insight into what had been done in the area of the study and also to give this very study a theoretical framework.

A 22-item questionnaire on data management practices of school administrators in Nsukka education zone of Enugu state was used to elicit information from 58 principals and 100 teachers of the board. Based on the mean scores, the following results were obtained.

1. That a lot of methods can be adopted for management of data like; computer, training of personnel in filing system, workshop on computer operation, processing of data with computer, collection of data by questionnaire, test scores, interview and observation, storing of data in file.
2. That there are a lot of constraints facing educational administrators as regards data management practices like lack of requisite knowledge of managing data, inadequacy of data storage in our schools.
3. That data management practices could be enhanced through organization of refresher courses, administrators should be computer literate.
4. That inadequate facilities/equipment such as computer system flash disc, floppy diskette, CD Rom, Microfilms, microfiche constitute a problem to data management practices in the schools.

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APPENDIX I

PART I

Department of Educational
Foundations,
Faculty of Education,
University of Nigeria,
Nsukka

Dear Sir/Madam,

DATA MANAGEMENT QUESTIONNAIRE (DMQ)

I am a postgraduate student of the above named department and university. This questionnaire is designed to collect information on Data Management Practices of Secondary School Administrators in Nsukka Education Zone of Enugu State. You are kindly requested to complete the questionnaire attached below to the best of your knowledge and experience.

You are assured that any information provided in this respect will be treated with the strictest confidentiality and has nothing to do with your job or person. I will remain ever grateful for your valued assistance and co-operation.

Yours sincerely,

Ezeagu, Mark N.

APPENDIX II

PART II

DEMOGRAPHIC DATA

Name of school: -----

Rank of Respondent: Principal () Teacher ()

Sex: Male () Female ()

PART III

Please indicate your level of agreement on the following statements by ticking () in the boxes against the statements of your choice. Please note:

VHE= Very High Extent SA= Strongly Agree

HE= High Extent A = Agree

LE= Low Extent D = Disagree

VLE= Very Low Extent SD= Strongly Disagree

S/N	SECTION A: DATA MANAGEMENT PRACTICES OF SCHOOL ADMINISTRATOR	VHE	HE	LE	VLE
1	Procurement of computer				
2	Training of skilled personnel in filling system				
3	Workshops/training on computer operation				
4	Data is processed with computer				
5	Data is collected by questionnaire, test-scores, interview and observation.				
6	Data is stored in file, flash, computer and CD for utilization.				

7	Data is retrieved from flash for utilization				
	SECTION B: CONSTRAINTS TO DATA MANAGEMENT PRACTICES OF SCHOOL ADMINISTRATOR	SA	A	D	SD
8	Lack of requisite knowledge of managing data				
9	Lack of data storage equipment like computers are not available				
10	Unavailability/epileptic power supply				
11	Lack of fund/inadequate fund				
12	Cupboards and filing cabinets are used by administrators				
13	Non-availability of data bank for storage and retrieval affect data management				
14	Display boards and shelves for mounting/displaying important books such as academic journals, reference books, registers, diaries, maps are not available.				
15	Results of data are sometimes different for the actual data processed				
	SECTION C: STRATEGIES THAT COULD BE EMPLOYED TO ENHANCE THE UTILIZATION OF DATA MANAGEMENT PRACTICES BY SCHOOL ADMINISTRATORS	SA	A	D	SD
16	Refresher courses				
17	Administrators should be computer literate				
18	Equipment used in processing, storage and retrieval of data should be made available				
19	There should be constant power supply in the administrator's schools.				
20	Administrators should not be persuade/cajoled to process and forward				

	falsified data				
21	The keeping of very sensitive records in the school should not be delegated to teachers				
22	Data should appear at the appropriate quarters exactly the way they are submitted by the administrators.				

Appendix III

APPENDIX IV

NAMES OF PUBLIC SCHOOLS IN THE ZONE.

S/NO	NSUKKA LOCAL GOVERNMENT AREA
1.	St. Theresa's College Nsukka
2.	Nsukka High School Nsukka
3.	Queen of the Rosary Secondary School Nsukka
4.	Community Secondary School Isienu
5.	Urban Girls Secondary School Nsukka
6.	Opi High School Opi
7.	Community Secondary School Lejja
8.	Community Secondary School Edem
9.	Community Secondary School Umabor
10.	Community Secondary School Ehandiagu
11.	Community Secondary School Okuje
12.	Community Secondary School Ibagwa-Ani
13.	Community Secondary School Obimo
14.	Community Secondary School Obukpa
15.	Community Secondary School Ede-Oballa
16.	Community Secondary School Ezebunagu
17.	St. Cyprian Girls Secondary School Nsukka
18.	Community Secondary School Nru
19.	Model Secondary School Nsukka
20.	Girls Secondary School Opi
21.	Community Secondary School Alo-Uno
22.	Community Secondary School Opi Agu
23.	Lejja High School Lejja
24.	Agu-Umabor Secondary School Umabor
25.	Urban Boys Secondary School Nsukka
26.	Community Secondary School Akpotoro-Obimo
27.	Community Secondary School Okutu
28.	Edem-Ani High School Edem-Ani
29.	Community Secondary School Breme
30.	Community Secondary School Ajuona Obimo

S/NO	IGBO ETITI
1.	Premier secondary School Ukehe
2.	St. James College Aku
3.	Community High School Ukehe
4.	Community Secondary School Ozalla
5.	Girls Secondary School Aku
6.	Community Secondary School Ohodo
7.	Community Secondary School Ekwegbe
8.	Community Secondary School Ukopi
9.	Orinandu community Secondary School Ukehe
10.	Community Secondary School Ohebe-Dim
11.	Community Secondary School Umunko
12.	Community Secondary School Aku
13.	Community Secondary School Umunna
14.	Community Secondary School Ikolo
15.	Akuteru Secondary School Ohodo
16.	Comprehensive Secondary School Diogbe

S/NO	UZO-UWANI L.G.A
1.	Adada Secondary School Mkpologwu
2.	Uzo-Uwani Secondary School Adani
3.	Attah Memorial High School Adaba
4.	Girls Secondary School Umulokpa
5.	Community Secondary School Abbi Ugbene
6.	Community Secondary School Ukpata
7.	Community Secondary School Nimbo
8.	Community Secondary School Ogurugu
9.	Uvuru Secondary School Uvuru
10.	Community High School Niobo
11.	Welfare Secondary Opanda
12.	Community Secondary School Ugbene-Ajima

(**Source:** Statistics Unit PPSMB, Nsukka Zone)