

**DATA MANAGEMENT FOR EFFECTIVE
ADMINISTRATION OF SECONDARY SCHOOLS IN
DELTA STATE**

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**DELTA STATE UNIVERSITY
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OCTOBER, 2017

CERTIFICATION

I declare that this research work was independently carried out by NAYON JULIE in the Department of Educational Administration and Policy Studies Delta State University, Abraka.

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APPROVAL PAGE

We the undersigned, certify that this dissertation was written by NAYON JULIE in the department of Educational Administration and Policy Studies, Delta State University Abraka.

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Date

DEDICATION

This dissertation is dedicated to my beloved Children Ejuaye and Olayemi, my siblings Besidone and Tuoyo and to my best friend Okofu Omamuli Ubaka for their support and encouragement.

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ABSTRACT

This study investigated data management and effective administration of secondary schools in Delta State. Five research questions and three hypotheses were raised for the study. Adopting the descriptive survey design, data for the study were collected using two instruments which include Educational Data Checklist and Data Management Questionnaire for both teachers and principals. The reliability coefficient of the Data management Questionnaire was 0.76. The systematic and stratified random sampling techniques were employed in the selection of 894 teachers and 138 secondary school principals from a population of 17,892 and 441 respectively. Data collected were analyzed using the percentage analysis and the mean score rating in answer to research question and the correlation and independent t-test analysis for hypotheses testing with the aid of a computer software the statistical package of the social sciences version 17. It was revealed by the study that there is a dearth on the availability of Data management tools in secondary schools of Delta state. Where available however, there is a high level of utilization of the available data management tools. It was also revealed that effective utilization of available data management tools contributed to effective school administration and ICT had no significant influence on effective management of data in Delta state secondary schools. Also, there is no significant difference on the impact of accurate data management in Urban and rural secondary school administration. The study concluded that adequate data management in secondary schools is highly dependent on the availability of data management tools and their effective utilization when available is of immense benefits to the actualization of secondary school administrative objectives. It was recommended that considering the importance and relevance of adequate data management, secondary schools should be provided with adequate data management tools especially data tools that are ICT based so as to keep with development trends in data storage and retrieval in other parts of the world and that secondary school administrators and teachers should be trained on modern techniques in data storage and retrieval so as to help them improve in the act of data gathering and management.

CHAPTER ONE

INTRODUCTION

Background to the Study

Secondary school education is an integral aspect in the development of skills through formal education. One of the bedrock to the actualization of the educational development is data management. School management is becoming increasingly complex in terms of staffing, student's population and planning. Expectedly therefore, there is an increasing need for proper management of data or school records, as a basis for engaging them for effective school administration (Oghuvbu, 2001).

Data in this study simply refers to books, files, time table, admission register, attendance register, log book, syllabus, scheme of work, visitors' book, punishment book, pupil's report card/ sheet, health record book, staff records, school cash book, record of school equipment/material, minutes book for meetings etc. Management on the other hand, is seen as getting things done through the effort of others. Management according to Thierauf (2000) is the coordination of human and material resource of an organization, in order to attain organizational objectives through planning, organizing, directing and controlling for the purposes of producing outputs.

While educational administration according to Ajayi (2001) is concerned with data collection, processing, storage, retrieval and utilization, in order to enhance the attainment of educational goals. It involves prudent management of data and a high degree of accountability. The management of data in the secondary schools like in any other organization is a cyclic process involving the principals, teachers, students, messengers and cleaners. The bulk of these data are kept manually and handled by teachers and students thus making the processing, retrieval and utilization difficult (oghuvbu, 2006).

Studies such as Nwadiani, (1994); Adeyemo, B., S. O. Adekoya and A. Oyedeji, (1995) have previously reported that data in secondary schools are poorly managed. For instance, report booklet, registers and diary litter every nooks and croons of the staff room without proper supervision. Most often than not, some teachers engaged class captain in marking of class attendance. This exercise is often marred with irregularities as some students who were present are marked absent, the reserves is sometimes the case. In addition to presentation of inaccurate data, the register in some cases end up been torn as a result of careless handling.

The business of data management and effective administration in the secondary school system has not yielded success due to insufficient facilities, funds and specialized management skills. For instance, most secondary schools have no shelves, cupboard or cabinets for storage. So data are kept in any available space, making every Tom, Dick and Harry have access to them (Fagbulu and Duze, 1988; Osakwe, 2011). In addition, computer and other electronic devices enhanced the storage of data for effective administration of schools. Unfortunately, most of the secondary schools in Delta-State lack this all important facilities, where they are available; they are either poorly engaged or unused.

Some school heads have been reported to have poor maintenance attitude so school records are left under licking roof or at worse, dilapidated offices. Where this is the case, school records are destroyed by rain and rodents (Nwagwu, Ehiamezor, Ajayi, Arubayi and Gang 1991; Nwadiani, 1994). Since it is expected that secondary schools to keep data to achieve effective and efficient educational goals/objectives. It is pertinent to ensure that these records are kept secured.

There are two basic methods of storing and retrieving records in schools, these methods are manual and electronic. Manually stored data are retrieved from files, cabinet's cupboard or shelves by going through the papers filed either alphabetically or numerically. Electronically stored data are retrieved by logging into the system to open the document. The data are then

viewed, accessed, used and saved back or deleted as required. The information could be printed out on paper. Recorded tape can be viewed or projected using appropriate projector.

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 (Fasasi, 2004). Apart from the school administrators, there are other public spirited individuals, philanthropists and donor agencies that are keen on lending support to Nigeria education but are handicapped by lack of accurate data. Hence, there is need for proper data management and storage (Okoli and Onuigbo 2014)

A nation cannot afford to plan poorly for the growth of its educational system hence; the need for application of modern data management techniques presupposes an efficient, reliable and up-to-date data system. Among all these, the first requirement is the availability of basic and adequate data which must be collected, analyzed, stored and managed in a most efficient manner for planners. It has been recognized that resources devoted to education can be put into effective use if there was a process of preparing a set of decision for action in the future. This process is known as data management because education planning comprises collection and analysis of quantitative and qualitative information concerning the educational system as well as related statistics which serve as a basis for policy decisions regarding the future development of education. Durosaro (1997) emphasizes the importance of efficient data management. He is of the view that; quantitative data otherwise called statistics relate to figures needed for practical planning exercises are of great importance in the educational system. In the same vein, Nwankwo (1981) opined that quantitative data relates not only to the educational system but also to other systems related to education. Therefore, it is important that all necessary effort should be applied to widen and improve data management especially in this information and computer age, all data managers should ensure that information collected are

stored and made available to those in need of it to perform their assignments especially researchers

Statement of the Problem

There is no doubt that the success or otherwise of any educational system to a large extent depends on the availability and utilization of vital and accurate data. Hence, the importance of accurate data system in any school establishment cannot be over emphasized. Little wonder, assessment of educational progress, optimal administration in and the overall efficiency of school institutions ultimately depends on effective data management; Needless to emphasize the facts that teachers and educational infrastructure contribute to effective administration of schools. Despite the overwhelming importance of data, it has been observed that; Most educational institutions have no record of relevant information when needed (Egwuyenga, 2011). In some cases there are evidence of poor continuous assessment record management leading to falsification in certain cases and neglect in other cases of continuous assessment practice due to lack of tools for data management (Alufohai, P.J and Akinlosotu 2016). Also, government policies on education and other ministries are said to be directly influenced by the quality of data made available to them which often times are largely misrepresented.

For instance, school heads are pressurized by politicians and other stakeholders to inflate population of students in most rural areas in order to retain such schools where ordinarily the latter is not feasible In respect to some teachers, they provide school records and as sure kept same as personal property making it impossible for sure data to be assessed and this have led to the increased inability of school heads to operate a central data bank. This adequacy makes it impossible to retrieve information with prescribed and economic of time. The paucity of data availability and access has been identified as the major backbone preventing the

development and growth of physical infrastructure in education and other ministries and departments of Nigeria. The energy expended for data retrieval often time may lead to great level of frustration that most people tend to give up good ideas that are targeted at improving the system (Asuquo, 2014; Oni and Okalanwon, 2011; Ajakaiye 2012)

From the above premise the problem of this study is hinged around the high level of inadequacies experienced in the storage and retrieval of relevant information in secondary schools due to paucity of data. The study therefore hopes to assess data management practice and how it could contribute to effective administration of secondary schools in Delta State.

Research Questions

The study was guided by the following research questions.

1. What are the available data management tools in public secondary schools of Delta State?
2. To what extent are available data management tools in public secondary schools of Delta-State utilized?
3. What is the relationship between data management practice and effective administration of public secondary schools in Delta State?
4. What is the role of ICT in the management and utilization of data in public secondary schools of Delta state?
5. What is the difference on the effect of data management practice in the administration of secondary schools of urban and rural areas of Delta-State?

Hypotheses

The following null hypotheses will be tested in the study

1. There is no significant relationship between data management practice and effective administration of secondary schools in Delta-State.
2. There is no significant relationship between ICT and effective management of data in secondary schools in Delta State.
3. There is no significant difference on the effect of data management practice in secondary school administration of urban and rural areas of Delta State.

Purpose of the Study

The purpose of this study is to investigate data management and effective educational administration. Specifically, the objectives of the study are highlighted as follows:

1. Investigate available data management tools in public secondary schools of Delta State.
2. Investigate the extent of utilization of available data management tools in public secondary schools in Delta-State.
3. Enquire if there is a relationship between data management practice and effective administration of public secondary schools in Delta State.
4. Determine the role of ICT in the management of educational data in public secondary schools in Delta State.
5. Know if there is a difference on the effect of data management practice in the administration of secondary schools in urban and rural areas of Delta-State.

Significance of the Study

The findings of this study will be of benefit to educational administrators, teachers, curriculum planners and other stakeholders in the education sub-sector.

First, it will create awareness in the mind of top educational administrators at the Post Primary Education Board of the importance of data management with regards to educational planning in the educational system.

The results of the study would help to broaden the administrative/management competencies of the Delta State Ministry of Basic and Secondary Education and Post Primary Education Board (PPEB) in modern technology based data banking and retrieval facilities that would be found useful by school heads, teachers, and other end-users.

This study will also benefit educational administrators/supervisors such as Chief Inspectors of Education, principals, teachers, and non-teaching staff in appreciating the need and importance of proper storage of data through the use of computer and its accessories, for effective running of schools.

The findings will add new knowledge and ideas on efficient and effective storage strategies/devices for curriculum planners and School Heads to enhance effective data management. Considering the relevance of this study in school administration and management, previous studies that have focused on school record management practices, shows that there is a gap in literature which focused on how school record and data management have contributed to effective school administration which this study hopes to fill the existing gap.

Scope and Delimitation of the Study

This study covers an investigation into available data management tools and the extent of their utilization in public secondary schools. It will also ascertain if there exists a relationship between the utilization of data management tools and effective school administration as well as if ICT has a role to play in the management and utilization of data in secondary schools. The study is delimited all public secondary schools in the twenty-five (25) local government areas of Delta-State spread across three senatorial districts.

Operational Definition of Terms

Data: These are facts collected for the purpose of processing them into information.

Data Management: Refers to all activities involved in generating, processing, storage, retrieval and utilisation of data for specified purposes.

School Administration: This is concerned with the application of rules, procedures and policies to facilitate the accomplishment of defined objectives within the school's organizational setting.

Effective School Administration: As used here it applies to application of rules, procedures, policies determined to produce a successful intended objective and goals.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviewed literature related to data management and effective educational administration. The review is done under the following sub- headings:

- ❖ Theoretical Framework
- ❖ Concept of data in Educational Systems
- ❖ Concept of Educational Administration
- ❖ Concept of Effectiveness
- ❖ Importance of Data Management
- ❖ Dimensions of Effective School Management
- ❖ Review of Empirical Studies

❖ Appraisal of Reviewed Literature

Theoretical Framework

This study is anchored on the administrative management theory of Henri Fayol (1925) and the systems theory of Mullins, (1998)

Administrative Management Theory: Henri Fayol, (1925)

The theory is probably the most influential contemporary that formulate a universal list of good management principles as a guide to management actions. The theory focuses on principle that characterized successful management of an organization; that the aims and objectives of an organization could be achieved through proper planning and organizing, commanding, co-coordinating, controlling (POCCC).

Planning refers to an activity that attempts to study or forecast the future and deciding today what shall be done in the future as regards the direction of the organization. The relevance of this theory to this study is that the smooth running of an institution depends on effective and efficient data management because data serve the purpose of referring to the past and a signpost to the future.

The theory further stated that organizing is a process of establishing the organization's structure of authority, dividing work into units and allocating these to people, department and building up both human and material resources of the organization. The implication of this is that data is important for effective planning, decision making by school administrators, ministry of education, and other related education authorities.

In the same vein Olagboye (2004) is of the opinion that proper data management facilitates the continuity of the administration of the school providing the needed information to ex-students, employer of labour, for job opportunities or admission. The theory also shows the need for power to be in hands of school administrator whose duty is to oversee the functions and performance of every staff within the school in order to meet the target goals and objective.

In applying this theory to this study, the process of proper data management practice helps in contributing to proper planning of the school as information are organized, stored and retrieved as at when due to help make informed decisions that will engender development and growth of the institution. Based on this it is opined that every step towards proper data management is targeted at controlling and solving possible challenges that will hinder effective school administration.

System Theory

Ludwig von Bertelentty (1928) points out that the system approach focused on the total work organization and the inter-relationships of structure and behaviour, and the range of variables the organization. The system approach, therefore, encourages managers to view the organization “both as a whole and as part of a larger environment.” The idea is that any part of an organization’s activities affects all other part and thus the organization as a whole”

The first task of this approach is to break the whole into logical parts that are interconnected in an orderly fashion. The next task is to study the component part and strive to understand how they perform in various circumstances.

1. Planning is the process of specifying goals, establishing priorities, and otherwise identifying and sequencing action steps to accomplish the goals.
2. Organizing is the establishing of a structure or set of relationships so that the plan can be accomplished.
3. Staffing is the assigning of personnel to specific roles or functions so that the organization works as designed.
4. Directing is the making of decisions and the communication of them to the staff who will implement them.

5. Coordinating is the task of directing the various components, and otherwise communicating between the units so that their interrelationships are smooth as is the function of the entire enterprise.
6. Reporting is the transfer of information through conferences, report, and records to those to whom the manager is accountable.
7. Budgeting is fiscal planning, accounting, and control.

The relevance of this theory to the study is that through good relationship and cooperation, data management and its effectiveness is attainable among the various bodies and units in the school whose duty it is to manage and/or store data for educational activities. Cooperation among administrators and staff in the school system will bring about the actualization of good goals and objectives. The building and maintenance of good relationship among the various groups in the school system cannot be over emphasized. School administrators therefore should involve all members of staff in decision-making of the school concerning inputs, transformational processes, outputs and feedback of the system. In that way, whatever decision reached will be handle with utmost care by all members since the school as a system is closely related and dependent that the interrelationship of any part affects the whole.

Concept of Data in Educational Systems

Data in this sense comes in many formats, serves many uses and passes through many corporate processes. It is designed to be used in deciding or discussing a plan or even something. Durosaro, (2004) maintained that, the planning and management of any nation's educational system depends 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, referred 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 whereas flow data are those changes in quality and quantity over a period of time.

Flow data refers to the numerical value of the movement of human and material resources (teachers, pupils and other materials) as they flow into, flow through and flow out of the educational system. He said, it is through this flow that we are able to generate information concerning new entrants, repeaters, dropouts, withdrawals and graduates of the educational system. These flow data according to Durosaro are useful for thorough 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 Agbo (2006), data are language, mathematical or symbols, which are generally agreed upon to represent people, objects, events and concepts. Whereas information on the other hand, is the result of modelling, formatting, organizing or converting data in a way that increases the level of knowledge for its recipient. Osuala and Okeke (2006) viewed data as “a term that means fact of all kinds”. Examples may include the one’s date of birth, one’s school grades, address, to mention but a few.

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 may consist 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.

Concept of Educational Administration

Peretomode,(1990) in more specific terms, said administration is concerned with applying rules, procedures, policies already determined in a way, that allows the accomplishment of defined common objectives within the organizational setting. He further

said that it is an institutional position held by an incumbent giving the responsibility for offering leadership to a work group in order to achieve predetermined objectives. He stressed that administration is concerned with the performance of executive duties, the carrying of policies and decisions to fulfil a purpose and the control of the day to-day running of an organization.

Educational administration is the process whereby the school head as the chief executive of his staff controls them towards the achievement of the goals of the school system (Ezeocha, 1989). It involves knowledge of the structure of educational organizations and the administrative process that relates to the management of those organizations. Nwankwo, (1982) on his part, sees that administration as a science which arose from the view of applying administrative principles and rules to the solution of organizational problems. He further stated that exponents of this view characterize the administrative process by such terms as human or social engineering, human management, resources organization. Walton (1991) described educational administration as those activities a person performs when he is acting as a school principal or a superintendent. Accordingly, activities in educational administration involve employment of staff, preparing budgets, directing personnel and checking the results.

Concept of Effectiveness

Okafor (1991) state that effectiveness connotes efficiency in producing desired result. Effectiveness of an organization has been defined as the degree to which it realizes its goals, while efficiency refers to the amount of resources used in producing a unit of output. Although they go hand in hand, they differ in the sense that effectiveness is often time result-oriented or goal-oriented while efficiency is targets adequate utilization of available and limited resources in to actualization of targeted and specific output. From the above definitions, we can deduce that no matter the type of establishment or an organization, administration involves planning, organizing, co-coordinating, controlling and directing the activities of people within such establishment towards the achievement of the set out goals.

For effective and efficient performance, planning, organizing, supervising, controlling and evaluating will be required. The administrator will therefore have to work with other people within the organization and be able to inspire them to work co-operatively with him/her so as to achieve his/her aim. According to Akutekwe (1991) administration has to do with the following:

1. Policy leadership and management.
2. Activities engaged in by people who occupy positions of formal responsibilities and authority in an organization.
3. Coordinating the efforts of the people towards the achievement of its goals.
4. The policies of board of education.

The above related discussion pointed to the fact that administration involves the activities or effort of group of people in an organization towards the achievement of anticipated common goals.

Importance of Data Management

According to Durosaro (2002) school records are important tools ‘for effective planning and administration of schools, they do this through the following:

- ❖ Assist pupils to know their progress and plan for their future (report sheet),
- ❖ Assist parents and employers of labour with particular information about performance and general behavior of their children or prospective employees respectively. (Report sheet, punishment book),
- ❖ Assist ex-pupils to get reference reports and recommendations for jobs or further studies (progress reports),
- ❖ Assist a new school head to know what previously obtained in the school, thereby maintaining continuity in ‘the general educational process (log book, minutes book, inspection reports etc),

- ❖ Assist Teachers in ensuring effective teaching and learning in the school (scheme of work, note of lesson, past question papers etc).
- ❖ Assist school heads, teachers and counselors in staking appropriate decisions on administrative and academic matters.

Dimensions of Effective School Management

School effectiveness is one complicated construct that has been difficult to conceptualise as it is in many things. The focus of many of the leadership studies in the school system has been to identify and describe the characteristics of effective school leadership. Wallin (2003) identifies four dimensions to effective school leadership namely: Establishing direction, Student learning, Organization and school climate, and Professional development.

In effective schools, principals establish direction ensuring that there are mission statements as well as a school philosophy that are well articulated and easily understood. Such statements are student focused and have been developed through the involvement of stakeholders like parents, students, and teachers (Iwu and Iwu, 2013). Such statements are also in harmony with ministry directives and include specific reference to the importance of respecting basic human rights of all people, including gender equity, the importance of protecting the natural environment in the local community and in the world generally. The principal of an effective school also develops and implements a “school growth plan” in collaboration with stakeholders while encouraging and facilitating staff development (Amanchukwu and Olubebe 2015).

In effective schools, principals develop and implement a coordinated school-wide plan to improve student achievement and ensure that there is a process in place to identify students who are experiencing difficulties. There are school-wide policies for assessment, evaluation, and reporting of student progress. The principal develops, communicates, and implements a programme for the supervision of instruction (Oghuvubu, 1999). The supervision programme

encourages and facilitates the use of a variety of instructional strategies to meet students' needs, and provides clear expectations just as the principal conducts informal and formal visits to classrooms, reviews teachers' daily and long range plans and ensures that staff are familiar with changes to mandated curricula (Oghuvubu, 2001) .

Additionally, he demonstrates leadership in curriculum development, develops plans for the evaluation and improvement of school programmes, develops and implements a coordinated plan to improve student achievement; ensures that expectations and standards are communicated to students and parents and ensures that there is a process for the identification of students who are experiencing difficulties – academic and personal. He also develops a system by which contributions and achievements of students and staff are recognized and celebrated; reviews the school's policies for assessment, evaluation, and reports of student progress to students and parents.

In an effective school, the principal establishes a process for the selection and assignment of instructional staff; develops and implements school policies and procedures to ensure the effective operation of the school, including the scheduling of students and classes. He also establishes and monitors policies concerned with the health, safety, and security of students and staff; monitors, controls, and provides accountability for all school funds; develops a staff and student/parent handbook of policies and procedures; and, develops a code of conduct, in collaboration with staff, students, and parents, which is published and made available to the school community.

The principal establishes and fosters effective communication with staff, students, parents, and the community; expresses ideas clearly in written and oral form, and listens and responds; encourages positive interpersonal relationships, characterized by an atmosphere of trust, openness, and collaboration; is flexible and fair, and demonstrates personal integrity; demonstrates personal concern for individuals and is accessible and visible; establishes

effective problem solving decision-making processes; addresses issues of concern and resolves conflicts; establishes an atmosphere which encourages others to participate in the decision-making process; solves problems cooperatively, delegates effectively, and promotes leadership opportunities; encourages positive school/community relationships; facilitates the operation of a parents' council and encourages active parental involvement; ensures that parents receive regular communications from the school. Additionally, in effective schools, principals create a programme for their own personal professional development having a programme of personal professional development and formulating personal goals and performance objectives while keeping current with education literature and research.

Bidwell (1965) in his review of School as a formal organization observed the inherent conflict in the principal's role as educator (professional or academic head) and administrator which is equally as important. The academic functions of the school head appear to be the main concern of the public while the system maintenance activities are neglected in auditing the role and effectiveness of the school principal. Principals' administrative effectiveness has also been looked at from the perspective of situational factors. Secondary school administration in Nigeria has been characterised by problems which consequently affect the effectiveness of some principals in the process of administration. With large and ever increasing students' enrolment in our schools today, the principals have considerable responsibilities, catering for the different inadequacies that came with increased school size. Okeke (1985) noted that "the bigger the situation to be managed or administered, the more complex the leadership needed and the greater the task involved".

The principals of secondary schools in Delta State, Nigeria are faced with inadequacy and sometimes non-availability of infrastructure facilities that should help smoothen the teaching and learning process, thus, posing special administrative problems. This is in addition to such other factors inherent in school settings like variety of stresses and conflicts, social

interaction in the schools as well as social and psychological conflicts resulting from ethnic and personality differences in the school setting.

According to Avery (2004), these limiting factors and constraints tend to make the administration of secondary schools less than favourable, because they place considerable limits on the degree of effectiveness of the school principals. Nwankwo (1979) opined that, in the process of managing these constraints, some school principals are more effective than others while Ibukun (1997) observed that leadership is affected by the organizational situation.

Review of Empirical Studies

This section reviewed available materials or studies on data management which are related to the present study. Ibezim (2006) carried out a study on the assessment of the electronic data management practices of selected universities in the South Eastern States of Nigeria. The findings showed that there was no significant difference in managing information among experienced and inexperienced, male and female, trained and untrained counsellors.

Ojionuka(2006), carried out an investigation on the administrative constraint to effective management of secondary schools in Orlu Education Zone of Imo State. The researcher observed that the major constraints to the effective management of secondary schools are financial constraints, lack of manpower, and communities' local politics. The study further revealed that there is no significant difference in the perception of male and female principals

Agbo, (2006) investigated the problems of data management for educational administration and planning in Ebonyi State secondary education system. The results of the data analysis revealed that the major sources of data for educational planning are the population census data and the data obtained from the statistics unit of Ministry of Education. The study also revealed that politics affect data management; government policies constitute problem to data management; lack of facilities/equipment such as: computer systems, data bank, storage

facilities, and vehicles for data collection. e.g. (bicycles; motor cycles, cars, boats) constitute serious problem to proper data management.

The above were 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

Appraisal of Reviewed Literature

It has been observed that data and its management are very vital in any organization especially in education sector. It is the determining factor that determines the success or failure of any educational system towards the realization of set goals. The researcher reviewed related literature under sub-headings which included concept of data in educational system, importance of data management, concept of educational administration and concept of effectiveness.

However, the theoretical framework was discussed under the following theories: administrative management theory and social systems theory. Some relevance of the theories to the present study was highlighted. It was noticed with the review of empirical studies that not much research work have been carried out on data management and effective educational administration in secondary schools in Delta State. This is the gap this study intends to fill.

CHAPTER THREE

RESEARCH METHOD AND PROCEDURE

This chapter presents details of the steps taken in carrying out this study. The steps are the research design, the population, sample and sampling technique, instrumentation, method of data collection and method of data analysis.

Research Design

The study adopted the descriptive survey and the correlation design as it sought to establish the impact of data management on administration of secondary schools in Delta State. The descriptive survey design was considered appropriate by the researcher in that it is flexible and effective in gathering data on the population as reflected by the representative sample,

while the correlational design will help in establishing the relationship between data management practices on school administration.

Population

The target population of the study comprised all principals (Heads) and teachers of the four hundred and forty one (441) secondary schools in Delta State. This population is given as 441 for principals and 17, 892 for teachers with a geographical spread of 237 principals in urban areas and 214 principals in rural areas. Teachers also had a geographical spread of 10, 788 in urban and 7,104 in rural areas respectively.

The distribution of the principals and teachers by local government area is shown in appendix I

Sample and Sampling Technique

The study employed the systematic and stratified random sampling techniques in the selection of subjects for the study. In employing the stratified sampling technique, all school principals and teachers were classified into geographical strata of urban and rural areas. In applying the systematic sampling technique, the researcher sampled 32% of the school principals and 5% of the study teachers. Leading to a sampling size of 138 principals sampling 46 principals per senatorial district, also, 298 principals were sampled per senatorial district. During the sampling process, the researcher further stratified the study areas into urban and rural areas and systematically selected the participants 50% across board. The sample distribution is shown in appendix III

Research Instrument

To guide this research, two instruments were used. The first instrument was an Educational Data Checklist. The instrument which was a modification of previous instruments sought to evaluate available data management tools was drawn from lists of school records and educational data checklist designed by various experts in educational administration (Multi

Resources Associate, 1990; Nwangwu *et al*, 1991; Nwangwu, 1995; Wale, 2001). The second instrument which was titled Data Management Questionnaire for teachers and principals had four sections. The first instrument which is the Data Management Checklist sought to evaluate the level of availability of data management tools in the secondary schools. The second instrument which was a slight modification of the Educational Data Checklist (EDC) had two sections. The first section was rated on a four point scale of Very High (4) High (3), Low (2) and Very Low (1) and was used to determine the extent to which the data management tools were utilized for data management. Responses of Principals and teacher in this instrument were used to verify the observations made through the checklist. The second section of the instrument which was sought to investigate the relationship between data management and effective school administration contained ten items which were rated on a three point scale of Very effective (3), Effective (2) and Not Effective (1). While the third section which focused on the role of ICT and effective data management contained 10 items, the fourth section had 10 items on the effect of adequate data management in secondary schools designed in a four point likert scale of Strongly Agree (SA), Agree (A), Disagreed (D), and Strongly Disagreed (SD), on all positively stated items.

Validation of the Instrumentation

To determine the validity, the constructed instruments were given to two specialists of measurement and evaluation at the Delta state University Abraka, before giving it to the research supervisor for final validation. At the end of this, all corrections noted were made and the final instrument was developed. They confirmed suitable face and content validities after scrutinizing the research questions and hypotheses and affirmed that the instrument was able to generate data to answer the research questions and test the stated hypotheses.

Reliability of the Instrument

Since the first instrument was a standardized checklist which was adopted from previous studies and has been duly validated by the supervisor, there was no need to determine the reliability. The reliability of the second instrument however was determined using the test retest method. Two pilot surveys of twenty secondary school principals who were not part of the sampled population within an interval of two weeks. Responses from these surveys were coded and the data generated used to determine the reliability of the instrument using the Pearson product moment correlation of the statistical package of social sciences version 17 (SPSS 17) to determine the reliability of the instrument and yielded a coefficient of 0.76. The reliability index of the instrument determined if the instrument has measured the characteristics it was designed to measure. According to the recommendations of Wiseman (1999), Johnson and Christensen (2000) and Borich (2004) a high reliability value of 0.70 or higher shows that an instrument is reliable.

Method of Data Collection

The data collection was done by a team of seven persons which was made up of the researcher and six research assistants. All of these research assistants were recruited from the teaching staff of secondary schools in the area of study. Before the commencement of data collection the researcher educated the research assistants on the objectives and desired outcome of the research, this enabled them get acquainted with the various research questions raised. In doing this it is important to note that a total of 1032 copies of the questionnaire were administered to 138 secondary school principals and 894 teachers' retrieving 1018. However, in the sorting process some of the questionnaires were rejected due to their inability to meet selection criteria by leaving blank a great deal of items raised in the questionnaire while some had multiple responses. Based on this therefore, a total of 1004 copies of questionnaire were

analyzed leading to an actual return rate of 97.3% from which generalizations were made as to the research questions and the tested hypotheses.

Method of Data Analysis

The responses of the respondents were worked out employing descriptive statistics and measures of central tendencies. Based on this, the frequencies so expressed guided the mean analysis of each of the items raised before the cumulative mean analysis section by section. In the analysis of the individual questionnaire items, a bench mark of 2.50 was set to accept as true any of the statements made in the questionnaire for the four point scoring scale while a score of 2.0 was set as bench mark for the three point scoring scale. These benchmarks were chosen because of the mean summary of the 4, 3, 2, 1 and the 3, 2 and 1 scales used in the instrument used. Data collected was summarized in tables and hypothesis tested with the Pearson product moment correlation analysis for hypotheses one and two while the independent t-test analysis for hypothesis three with the aid of the statistical package of the social sciences version 17 (SPSS 17). The choice of the Pearson correlation analysis was made because the correlation analysis establishes relationships and the extent to which an independent variable influences a dependent variable. While t-test compares differences in mean of two independent samples. In doing this, teachers response in section B of the second research instrument was correlated against their responses in sections C and D for hypothesis two and three respectively.

CHAPTER FOUR

PRESENTATION OF RESULT AND DISCUSSION

In this chapter, the data obtained from the study and data analysis are presented and discussed.

Table: 1: Demographic Profile of Respondent Principals and Teachers

| Variable | Frequency | Percentage |
|-----------------------|-----------|------------|
| Designation | | |
| Teachers | 866 | 86.25 |
| Administrators | 138 | 13.75 |
| Total | 1004 | 100 |
| School Location | | |
| Urban | 498 | 49.6 |
| Rural | 506 | 50.4 |

| | | |
|--------------|------|-----|
| Total | 1004 | 100 |
|--------------|------|-----|

Source: Fieldwork, 2015

Table 1 indicates the demographic profiles of respondent principals and teachers. Respondents comprised of 86.25% teachers and 13.75% principals out of which 49.6% were urban residents and 50.4% were rural residents. Relative to the Age distribution, the data showed that 2.8% were below 30 years, 28.7% were between 30-45 years, 43% were between 46-55 years while 25.5% were above 55 years old. Their teaching experience revealed that respondents were mostly experienced teachers with only 21.7% having an experience below 10 years, 40.4% had an experience between 10-20 years while 37.8% had an experience above 20 years.

Answer to Research Questions

Research Question One: What are the available data management tools in public secondary schools of Delta State?

Table 2: Available Data Management tools in Delta state Secondary Schools

| S/N | Data Management Facilities | AVAILABLE | | NOT AVAILABLE | |
|-----|----------------------------|-----------|-----|---------------|----|
| | | F | % | F | % |
| 1 | Student Report Form | 138 | 100 | 0 | 0 |
| 2 | Monthly Returns | 138 | 100 | 0 | 0 |
| 3 | Attendance Register | 138 | 100 | 0 | 0 |
| 4 | Admission Register | 92 | 67 | 46 | 33 |
| 5 | Seniority List | 138 | 100 | 0 | 0 |
| 6 | Inspector Report Book | 34 | 25 | 104 | 75 |
| 7 | Visitors Book | 97 | 70 | 41 | 30 |
| 8 | Minutes of Staff Meeting | 30 | 22 | 108 | 78 |
| 9 | PTA Minutes Book | 28 | 20 | 110 | 80 |
| 10 | Log Book | 138 | 100 | 0 | 0 |

| | | | | | |
|-----------|---------------------------------------|-----|-----|-----|-----|
| 11 | Weekly Duty Report Book | 65 | 47 | 73 | 53 |
| 12 | Weekly Diary Of Work | 138 | 100 | 0 | 0 |
| 13 | Conduct Book | 15 | 11 | 123 | 88 |
| 14 | Subject- Teacher Attendance | 90 | 65 | 48 | 35 |
| 15 | Staff Records | 52 | 38 | 86 | 62 |
| 16 | Duty Roster | 94 | 68 | 44 | 32 |
| 17 | Committee Report Book (Student) | 25 | 18 | 113 | 82 |
| 18 | Committee Report Book (Teacher) | 11 | 8 | 127 | 92 |
| 19 | Development/Growth Records | 4 | 3 | 134 | 97 |
| 20 | Health Records | 30 | 22 | 104 | 78 |
| 21 | Family History | 58 | 42 | 80 | 58 |
| 22 | School Time-Table | 138 | 100 | 0 | 0 |
| 23 | Computer System | 55 | 40 | 83 | 60 |
| 24 | Television Set | 44 | 32 | 94 | 68 |
| 25 | Internet Facility | 17 | 12 | 121 | 88 |
| 26 | Immunization Records | 7 | 5 | 131 | 95 |
| 27 | Participation In School Activities | 59 | 43 | 79 | 57 |
| 28 | Fees Register | 0 | 0 | 138 | 100 |
| 29 | Past Students Records | 58 | 42 | 80 | 58 |
| 30 | Academic performance Records | 66 | 48 | 72 | 52 |
| 31 | Lesson Note And Plan | 52 | 38 | 86 | 62 |
| 32 | Subject Syllabus | 104 | 75 | 34 | 25 |
| 33 | Punishment Record | 7 | 5 | 131 | 95 |
| 34 | Transfer Certificate | 137 | 99 | 1 | 1 |
| 35 | Parents Visit Card | 11 | 15 | | 85 |
| 36 | Skill Acquisition | 0 | 0 | 138 | 100 |
| 37 | Records Of Building | 7 | 5 | 131 | 95 |
| 38 | Records Of PTA Contributions | 16 | 12 | 122 | 88 |
| 39 | Budget Book | 12 | 9 | 126 | 91 |
| 40 | Impress Rest Account Book | 0 | 0 | 138 | 100 |
| 41 | Stock Book/ Inventory | 106 | 77 | 32 | 23 |
| 42 | Cash Book | 10 | 7 | 128 | 93 |
| 43 | Clubs And Associations Book | 17 | 12 | 121 | 88 |

| | | | | | |
|-----------|--|-----|-----|-----|----|
| 44 | Teachers Movement Book | 86 | 62 | 52 | 38 |
| 45 | Teachers Time Book | 138 | 100 | 0 | 0 |
| 46 | Donations By Voluntary Organizations | 7 | 5 | 131 | 95 |
| 47 | Records Of Donations By Parents | 4 | 3 | 134 | 97 |
| 48 | Student – Teachers Record Book | 25 | 18 | 113 | 82 |
| 49 | External Examinations Results Analysis | 131 | 95 | 7 | 5 |
| 50 | Games And Sport Records | 21 | 15 | 117 | 85 |

Source: Fieldwork, 2015

Table 2 reveals the trend in the availability of Data management tools in secondary schools of Delta State. Out of the 50 data management tools listed, responses of the respondents indicated a high percentage availability of only 17 data management tools. This was determined by the minimum of 50% availability in the items. A mild availability was determined by a score of between 40-49% and this was found in only 6 tools while a percentage score below 40% indicated a non availability found in 27 tools. The Data management tools that were available include student report form, monthly returns, attendance register, admission register, seniority list, visitors book, log book, subject-teacher attendance, duty roster, school time table, subject syllabus, transfer certificate, stock book/inventory, teachers movement book, teachers time book and external examination results. Data management tools that had mild availability include; Weekly Duty Report Book, Family History, Computer System, Participation In School Activities, Past Students Records and Academic performance Records.

Research Question Two: To what extent are available data management tools in public secondary schools of Delta-State utilized?

Table 3: Level of Utilization of Available Data Management tools in Delta State Secondary Schools

| S/N | Data Management Facilities | Mean | SD | Remark |
|-----|----------------------------|------|------|--------------|
| 1 | Student Report Form | 3.23 | 0.57 | Utilized |
| 2 | Monthly Returns | 3.52 | 0.81 | Utilized |
| 3 | Attendance Register | 3.33 | 0.85 | Utilized |
| 4 | Admission Register | 3.28 | 0.93 | Utilized |
| 5 | Seniority List | 2.11 | 0.77 | Not Utilized |
| 6 | Inspector Report Book | 3.07 | 0.85 | Utilized |
| 7 | Visitors Book | 3.33 | 1.01 | Utilized |
| 8 | Minutes Of Staff Meeting | 3.33 | 1.01 | Utilized |
| 9 | PTA Minutes Book | 3.09 | 0.94 | Utilized |
| 10 | Log Book | 2.41 | 0.93 | Not Utilized |
| 11 | Weekly Duty Report Book | 3.41 | 0.65 | Utilized |
| 12 | Weekly Diary Of Work | 3.28 | 0.78 | Utilized |
| 13 | Conduct Book | 3.48 | 0.81 | Utilized |

| | | | | |
|-----------|------------------------------------|------|------|--------------|
| 14 | Subject- Teacher Attendance | 2.74 | 1.00 | Utilized |
| 15 | Staff Records | 3.06 | 0.85 | Utilized |
| 16 | Duty Roster | 2.43 | 1.30 | Not Utilized |
| 17 | Committee Report Book (Student) | 2.54 | 1.00 | Utilized |
| 18 | Committee Report Book (Teacher) | 1.91 | 1.40 | Not Utilized |
| 19 | Development/Growth Records | 2.61 | 0.93 | Utilized |
| 20 | Health Records | 2.37 | 1.16 | Not Utilized |
| 21 | Family History | 2.46 | 1.10 | Not Utilized |
| 22 | School Time-Table | 1.95 | 1.38 | Not Utilized |
| 23 | Computer System | 2.22 | 1.26 | Not Utilized |
| 24 | Television Set | 2.48 | 1.07 | Not Utilized |
| 25 | Internet Facility | 1.89 | 0.95 | Not Utilized |
| 26 | Immunization Records | 2.09 | 1.33 | Not Utilized |
| 27 | Participation In School Activities | 2.46 | 1.09 | Not Utilized |
| 28 | Fees Register | 2.35 | 1.18 | Not Utilized |
| 29 | Past Students Records | 2.43 | 1.11 | Not Utilized |
| 30 | Academic performance Records | 1.96 | 1.38 | Not Utilized |
| 31 | Lesson Note And Plan | 2.43 | 1.11 | Not Utilized |
| 32 | Subject Syllabus | 2.65 | 1.02 | Utilized |
| 33 | Punishment Record | 2.39 | 1.14 | Not Utilized |
| 34 | Transfer Certificate | 2.52 | 1.30 | Not Utilized |
| 35 | Parents Visit Card | 2.24 | 1.25 | Not Utilized |
| 36 | Skill Acquisition | 2.52 | 1.03 | Utilized |
| 37 | Records Of Building | 2.50 | 1.05 | Not Utilized |
| 38 | Records Of PTA Contributions | 1.91 | 1.40 | Not Utilized |
| 39 | Budget Book | 2.41 | 0.93 | Not Utilized |

| | | | | |
|-----------|--|------|------|--------------|
| 40 | Imp Rest Account Book | 1.91 | 0.94 | Not Utilized |
| 41 | Stock Book/ Inventory | 2.54 | 1.00 | Utilized |
| 42 | Cash Book | 1.91 | 1.40 | Not Utilized |
| 43 | Clubs And Associations Book | 2.00 | 1.03 | Not Utilized |
| 44 | Teachers Movement Book | 3.24 | 1.04 | Utilized |
| 45 | Teachers Time Book | 3.26 | 1.00 | Utilized |
| 46 | Donations By Voluntary Organizations | 2.30 | 1.21 | Not Utilized |
| 47 | Records Of Donations By Parents | 2.17 | 1.29 | Not Utilized |
| 48 | Student – Teachers Record Book | 2.52 | 1.03 | Utilized |
| 49 | External Examinations Results Analysis | 2.96 | 1.18 | Utilized |
| 50 | Games And Sport Records | 2.62 | 1.53 | Utilized |

Source: Fieldwork, 2015

Table 3 showed the level of utilization of available data management tools in Secondary schools in Delta state. The data revealed a high level of utilization of the available data management tools showing a high mean score of 2.5 and above in all of the available data management tools. The data management tools that showed a high level of effective utilization are as follows; Student Report Form, Monthly Returns, Attendance Register, Admission Register, Inspector Report Book, Visitors Book, Minutes of Staff Meeting, PTA Minutes Book, Weekly Duty Report Book, Weekly Diary Of Work, Conduct Book, Subject-Teacher Attendance, Staff Records Committee Report Book (Student), Development/Growth Records, Subject Syllabus, Skill Acquisition, Teachers Movement Book, Teachers Time Book, Student –Teachers, Record Book, External Examinations Results Analysis and Games And Sport Records.

Research Question Three: What is the relationship between data management practice and effective administration of public secondary schools in Delta State?

Table 4a Teachers Perception of the effect of Data Management practice on Secondary School Administration Determinants

| S/N | ITEM | N=866 | Mean | SD | Remark |
|-----|--------------------------------------|-------|------|------|--------|
| 1 | Attainment of school goals | | 2.02 | 0.84 | Accept |
| 2 | Instructional leadership | | 2.32 | 1.02 | Accept |
| 3 | Evaluation of Teachers | | 2.64 | 0.94 | Accept |
| 4 | Human resources management | | 1.78 | 0.89 | Reject |
| 5 | Safe Environment Maintenance | | 1.04 | 0.78 | Reject |
| 6 | Orderly environment | | 1.03 | 0.46 | Reject |
| 7 | Data management | | 2.32 | 0.82 | Accept |
| 8 | Decision-making based on data | | 2.50 | 0.95 | Accept |
| 9 | Professional development of teachers | | 2.38 | 0.82 | Accept |
| 10 | Coordination of school resources | | 2.64 | 1.04 | Accept |

Source: Fieldwork, 2015

Table 4a shows teachers perception of the influence of data management on principals' effective secondary school administration. The data presented revealed that it was accepted that adequate data management had influence on attainment of school goals, instructional leadership, evaluation of teachers, data management, decision-making based on data, professional development of teachers and co-ordination of school resources. On the negative perspective, it revealed that adequate data management did not influence human resource

management, orderly environment and safe environmental maintenance. The implication of this is that adequate data management by school administrators have had positive impact on the effective administration of secondary schools.

Table 4b: Relationship between Data Management Practice and School Administration

| Variable | Data Management practice | Effective School Administration |
|---|--------------------------|---------------------------------|
| Data Management: | | |
| Pearson Correlation | 1 | 0.296 |
| Significance (2 Tailed) | | 0.000 |
| N = 866 | | |
| Effective School Administration; | | 1 |
| Pearson Correlation | 0.296 | |
| Significance (2 Tailed) | 0.000 | |
| N = 866 | | |

Source: Fieldwork, 2015

The Pearson r of 0.296 indicates a positive relationship between data management practice and effective school administration.

Research Question Four: What is the role of ICT in the management and utilization of data in public secondary schools of Delta state?

Table 5 Role of ICT in the Utilization of Data Management Tools

| S/N | ITEM | Mean | SD | Remark |
|-----|---|------|------|--------|
| 1 | ICT facilities are essential and adequate for retrieval of information through the internet. | 2.38 | 0.65 | Reject |
| 2 | There are variation of ICT facilities provided for that are used for data storage and retrieval | 1.61 | 0.36 | Reject |
| 3 | ICT enhances teachers attendance record practice | 3.28 | 0.81 | Accept |
| 4 | My school is well equipped with ICT facilities | 2.48 | 0.96 | Reject |
| 5 | Effective use of ICT facilities promotes proper record management | 2.84 | 1.08 | Accept |
| 6 | I utilize computers in storing information in my school | 2.75 | 0.91 | Accept |
| 7 | ICT contributes to teachers competencies in record management | 2.48 | 0.79 | Reject |
| 8 | Examination results are processed using ICT facilities in my school | 1.42 | 0.49 | Reject |
| 9 | ICT facilities are used in the exchange of information between teachers | 1.98 | 0.62 | Reject |
| 10 | ICT facilities are mostly used to teach computer studies in my school | 2.57 | 0.53 | Accept |

Source: Fieldwork, 2015

Table 5 presents responses on the role of ICT in the utilization of data management tools in Delta state secondary schools. The result showed that most secondary schools lacks ICT based data management tools as clearly shown in items 1, 2, 3 and 10 which rejected the availability of ICT facilities. On the utilization of ICT based facilities, it was revealed further that data management such as processing of result and exchange of information amongst teachers did were not ICT based. Likewise, a huge part of the teachers and principals are not ICT reliant as evidenced in items 7, 8 and 9.

Research Question Five: Is there any difference on the effect of data management practice in the administration of secondary schools of urban and rural areas of Delta-State?

Table 6: Effect of Adequate Data Management in Urban and Rural Secondary School Administration

| SN | ITEM | Urban | | | Rural | | |
|-----------------|--|-------|------|----------|-------|------|----------|
| | | Mean | SD | Remark | Mean | SD | Remark |
| 1 | Enhance decision-making in my school | 2.72 | 1.01 | Accepted | 2.74 | 0.94 | Accepted |
| 2 | Promotes effective supervision of teaching in my school | 2.88 | 1.01 | Accepted | 2.77 | 1.00 | Accepted |
| 3 | Promotes objectivity in the discharge of duties in my school | 2.50 | 0.94 | Accepted | 2.61 | 1.40 | Accepted |
| 4 | Provides sound and reliable basis for career guidance | 2.53 | 0.93 | Accepted | 1.95 | 1.03 | Rejected |
| 5 | Gives room for accurate assessment of students achievements | 2.78 | 0.65 | Accepted | 2.67 | 1.04 | Accepted |
| 6 | Provide the basis for adequate assessment of student behaviour | 3.76 | 0.78 | Accepted | 2.85 | 1.00 | Accepted |
| 7 | Promotes an accurate assessment of the teacher | 3.74 | 0.81 | Accepted | 2.82 | 1.21 | Accepted |
| 8 | Makes it easier for my Principal to provide objective information to relevant stakeholders | 3.84 | 1.08 | Accepted | 2.80 | 1.29 | Accepted |
| 9 | Enhances proper planning, coordination, and evaluation of programmes | 2.94 | 0.85 | Accepted | 3.48 | 1.03 | Accepted |
| 10 | Provides legal basis to justify administrative action | 3.76 | 1.30 | Accepted | 3.38 | 1.18 | Accepted |
| | Grand Mean | 3.145 | 0.94 | | 2.807 | 1.11 | |
| Mean Difference | | | | | | | 0.34 |

Source: Fieldwork, 2015

Table 6 presents responses on the effect of adequate data management in urban and rural secondary schools of Delta state. Data presented revealed that these impacts were not different based on urban and rural locations of the schools. All respondents in urban and rural areas accepted and agreed that adequate data management enhances decision making, gives room for adequate student assessment, provides sound and reliable basis for career guidance, adequate

provision of information, enhances proper planning and evaluation as well as provides legal basis for justification of actions and inactions.

Hypotheses

Hypothesis One: There is no significant relationship between accurate data management and effective administration of secondary schools in Delta-State.

Table 7: Correlation coefficient of relationships Relationship between Data Management and Effective School Administration

| Variable | Data Management | Effective School Administration |
|-------------------------|-----------------|---------------------------------|
| Data Management: | | |
| Pearson Correlation | 1 | 0.296 |
| Significance (2 Tailed) | | 0.000 |
| N = 866 | 866 | 866 |
| Effective School | | 1 |
| Administration; | 0.296 | |
| Pearson Correlation | 0.000 | |
| Significance (2 Tailed) | | |
| N = 866 | | |

Source: Fieldwork, 2015

Table 7 shows that the Pearson r value of 0.296 is significant at $p = 0.000$ ($P < 0.05$) thus there is a significant relationship between data management and effective school administration, based on this the null hypothesis is rejected. The implication of this is that adequate data management by secondary school principals have contributed to effective school administration.

Hypothesis Two: There is no significant relationship between ICT and effective management of data in secondary schools in Delta State.

Table 8: Correlation coefficient of relationships between ICT and effective management of data in secondary schools

| Variable | ICT | Effective Data Management |
|-----------------------------------|--------|---------------------------|
| ICT: | | |
| Pearson Correlation | 1 | -0.039 |
| Significance (2 Tailed) | | 0.317 |
| N = 1004 | 1004 | 1004 |
| Effective Data Management: | | |
| Pearson Correlation | -0.039 | 1 |
| Significance (2 Tailed) | 0.317 | |
| N = 1004 | | |

Source: Fieldwork, 2015

Table 8 shows that the Pearson r value of -0.039 is not significant at $p = 0.317$ ($P > 0.05$) thus there is no significant relationship between ICT and effective management of data in Delta state secondary schools. Based on this the null hypothesis is accepted. The implication of this is that adequate data management by secondary school principals was not entirely dependent on the utilization of ICT tools, this may have occurred because of the poor availability of ICT data management tools and low level of compliance to ICT by the principals.

Hypothesis Three: There is no significant difference on the impact of accurate data management in secondary school administration of urban and rural areas of Delta State.

Table 9: Test of Significant Difference on the Impact of Accurate Data Management in Urban and Rural Secondary School Administration

| Variable | N | Mean | SD | t-cal | tabulated t (t-crit.) | DF | Significance | Decision |
|--------------|-----|-------|-------|-------|--------------------------|------|--------------|------------------------|
| Urban | 498 | 31.44 | 9.36 | 1.523 | 1.960 | 1002 | 0.073 | Accept Null Hypothesis |
| Rural | 506 | 28.07 | 11.12 | | | | | |

Source: Fieldwork, 2015

From Table 9, it is revealed that the t-cal of 1.523 is lesser than the tabulated t of 1.960 at a significance of $p=0.073$ leading to the acceptance of the null hypothesis that there is no significant difference on the impact of accurate data management in Urban and rural secondary school administration

Discussion of Findings

The general objective of this study was to access how data management have contributed to effective administration of secondary schools in Delta state Nigeria. Findings from the study revealed the unavailability of most data management tools that were check listed. In all of the 50 data management tools checked for, only 17 out of the 50 listed were adequately available for utilization in data management. A further investigation on the utilization of the available data management tools revealed a high level of utilization of the available data management tools as teachers and principals of the secondary schools agreed to the effective utilization of the available tools. Durosaro, (2004) submits that one of the major challenges confronting data management in secondary schools is the unavailability of computer based data management tools. It was further submitted that another factor confronting data management is hinged to the pattern and means of transfer of the data needed to be stored or managed. Evidences from this study reveal that the challenges outlined by Duraso were eminent in public secondary schools in Delta state.

Relative to the utilization of available data management tools, the study submits that there is a high level of utilization of the available data management tools and they have contributed to promoting administrative effectiveness relative to attainment of school goals, instructional leadership, evaluation of teachers, data management, decision-making based on data, professional development of teachers and co-ordination of school resources. These submissions are in line with those of Ndiku, Oyoo and Owano, (2014) that effective data management is the backbone of educational planning and must be addressed in schools to realize the goal of education for all goals. Also in support of the observations made above is the study of Benwari and Dambo, (2014) who noted that effective utilization of data management tools will enhance easy access to information when needed as well as promote efficiency in the secondary school system.

In another development, the study revealed a non significant influence of ICT on data management practices of secondary school principals and teachers. There is no doubt that the justification of claims such as this may be hinged on the high level of non compliance to ICT by most secondary schools. This high level of non compliance is hinged seriously to the unavailability of ICT data management tools as a popular Greek adage says “You cannot give what you don’t have.” No wonder Benwari and Dambo, (2014) opined that effective data management is intertwined around the management systems of information. She further opined that the availability of data management tools such as computers will enhance the storage and exchange and storage of data between school administrators and teachers within a particular school and between different schools.

Relative to the perceived impact of adequate data management in secondary schools, the study found no significant difference between urban and rural secondary schools as it was agreed that adequate data management enhances decision making, gives room for adequate student assessment, provides sound and reliable basis for career guidance, adequate provision

of information, enhances proper planning and evaluation as well as provides legal basis for justification of actions and inactions. This claim gives credence to those of earlier studies such as those of Fasasi, (2004) that adequate school records can also assist school managers in supplying information to and soliciting assistance from parents, communities, government agencies and international organizations. Likewise, the studies of Egwuyenga, (2009); Osakwe, (2011); Amanchuku and Ololube, (2015) submits that the essence of school adequate record and data management is for the preservation of history and easy referral in the future. Based on this, the non significant difference that exists between urban and rural secondary schools could be justified from the angle that all secondary schools need similar conditions, environments and facilities which include human and capital resources to succeed in adequate data management and school administration.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of the Study

The objective of this study was to investigate data management and effective administration of secondary schools in Delta State. The research stated as its objective viz; determination of available data management tools in public secondary schools of Delta State; determination of the level of effectiveness in the utilization of available data management tools in public secondary schools in Delta-State, determination of the relationship between data management and effective administration of public secondary schools in Delta State; determination of the role of ICT in the management of educational data in public secondary schools in Delta State and the determination of the differences on the impact of accurate data management in the administration of secondary schools in urban and rural areas of Delta-State.

In a bid to actualize the stated objectives, the study was anchored theoretically on the administrative management theory of Henri Fayol (1925) and the systems theory of Mullins, (1998). The administrative management theory proposes that for effective administration, adequate planning and accurate data management are required from the school administrators so as to ease information storage and retrieval. On his part, the systems theory by Mullins, (1998) proposes the interconnection that exists between the various organs of school administration and notes that any level of input in any aspect of school management affects the whole. It further notes that a proper record and accurate account of what happens in each of the administrative units goes a long way in affecting the overall performance and management of the school.

The study adopted the descriptive survey design and utilized two instruments namely Educational Data Checklist and Data Management Questionnaire for both teachers and principals. The systematic and stratified random sampling techniques were employed in the selection of subjects for the study and this led to the sampling of 894 teachers and 138 secondary school principals from a population of 17,892 and 441 respectively. Data collected was analysed using the percentage analysis and the mean score rating in answer to research

question and the correlation and independent t-test analysis for hypotheses testing with the aid of a computer software the statistical package of the social sciences version 17 (SPSS 17) . Based on the outcome of the data analysis, the following has been summarized as the major highpoints of the findings.

1. There is a dearth on the availability of Data management tools in secondary schools of Delta state. This is evidenced by the high percentage availability of only 17 data management tools, mild availability 6 tools and non availability of 27 tools listed in the check list.
2. There is a high level of utilization of the available data management tools which include Student Report Form, Monthly Returns, Attendance Register, Admission Register, Inspector Report Book, Visitors Book, Minutes of Staff Meeting, PTA Minutes Book, Weekly Duty Report Book, Weekly Diary Of Work, Conduct Book, Subject-Teacher Attendance, Staff Records Committee Report Book (Student), Development/Growth Records, Subject Syllabus, Skill Acquisition, Teachers Movement Book, Teachers Time Book, Student –Teachers, Record Book, External Examinations Results Analysis and Games And Sport Records.
3. Utilization of available data management tools contributed to effective school administration. Thus there is a significant relationship between data management and effective school administration.
4. There is a high degree of dearth in ICT in Delta state secondary schools thus ICT had no significant influence on effective management of data in Delta state secondary schools.
5. There is no significant difference on the effect of data management practices in the administration of Urban and rural secondary schools

Conclusion

In conclusion adequate data management in secondary schools is highly dependent on the availability of data management tools and their effective utilization when available is of immense benefits to the actualization of secondary school administrative objectives. The identified benefits of the effective data management do not also vary across secondary schools whether located in urban or rural locations.

Recommendations

From the findings of this study, the following recommendations are hereby made.

1. Considering the importance and relevance of adequate data management, secondary schools should be provided with adequate data management tools especially data tools that are ICT based so as to keep with development trends in data storage and retrieval in other parts of the world.
2. Secondary school administrators and teachers should be trained on modern techniques in data storage and retrieval so as to help them improve in the act of data gathering and management.
3. Government should ensure adequate monitoring of secondary school administrators and teachers data storage practices so as to ensure that they update their regularly and as at when due.
4. School administrators and teachers making positive efforts in adequate data management should be encouraged in form of awards and prizes so as to encourage those with poor data management practices.

Contributions to Knowledge

1. The study has been able to establish that there is a shortfall on available data management tools in secondary schools.

2. The study has been able to give supporting evidence to the existing claims that there is a positive relationship existing between data management practice and secondary school administration.

Suggestions for Further Studies

1. Attitude of secondary school principals and teachers to record keeping and data management.
2. Assessment of funding for Data management tools in secondary schools.

Limitations of the Study

The limitation of this study stems from the possible bias that may have come from the respondents in responding to the instruments, it was observed that their responses on utilization did not match completely the observation made on available data management tools in the schools.

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APPENDIX I

EDUCATIONAL DATA CHECKLIST

**Department of Educational Admin & Policy Studies,
Delta State University,
P.M.B 1
Abraka.
23rd February, 2015**

Dear Respondent,

I am a Post graduate student of the above institution carrying out a research work on Data management and effective administration of secondary schools in Delta State as part of the requirement for the award of Masters of Education (M.Ed.) degree in Educational Administration and Policy Studies. I would be grateful if you could sincerely fill in this checklist assessing the availability of data management tools in your school. Be assured that all information given will be used for academic and research purpose only.

Yours Sincerely,

**NAYON, Julie
Researcher**

EDUCATIONAL DATA CHECKLIST

Please fill where appropriate and tick where necessary, be rest assured that your responses will be used for research purposes only.

Name of School: _____

Location of School: Urban: () Rural ()

| S/N | Data Management Facilities Needed in Schools | AVAILABLE | NOT AVAILABLE |
|-----|--|-----------|---------------|
| 1 | Student Report Form | | |
| 2 | Monthly Returns | | |
| 3 | Attendance Register | | |
| 4 | Admission Register | | |
| 5 | Seniority List | | |
| 6 | Inspector Report Book | | |
| 7 | Visitors Book | | |
| 8 | Minutes Of Staff Meeting | | |
| 9 | PTA Minutes Book | | |
| 10 | Log Book | | |
| 11 | Weekly Duty Report Book | | |
| 12 | Weekly Diary Of Work | | |
| 13 | Conduct Book | | |
| 14 | Subject- Teacher Attendance | | |
| 15 | Staff Records | | |
| 16 | Duty Roster | | |
| 17 | Committee Report Book (Student) | | |
| 18 | Committee Report Book (Teacher) | | |
| 19 | Development/Growth Records | | |
| 20 | Health Records | | |
| 21 | Family History | | |
| 22 | School Time-Table | | |
| 23 | Computer System | | |
| 24 | Television Set | | |
| 25 | Internet Facility | | |
| 26 | Immunization Records | | |
| 27 | Participation In School Activities | | |
| 28 | Fees Register | | |
| 29 | Past Students Records | | |
| 30 | Academic performance Records | | |
| 31 | Lesson Note And Plan | | |
| 32 | Subject Syllabus | | |
| 33 | Punishment Record | | |
| 34 | Transfer Certificate | | |
| 35 | Parents Visit Card | | |
| 36 | Skill Acquisition | | |
| 37 | Records Of Building | | |
| 38 | Records Of PTA Contributions | | |
| 39 | Budget Book | | |
| 40 | Imp Rest Account Book | | |
| 41 | Stock Book/ Inventory | | |
| 42 | Cash Book | | |
| 43 | Clubs And Associations Book | | |
| 44 | Teachers Movement Book | | |

| | | | |
|----|--|--|--|
| 45 | Teachers Time Book | | |
| 46 | Donations By Voluntary Organizations | | |
| 47 | Records Of Donations By Parents | | |
| 48 | Student – Teachers Record Book | | |
| 49 | External Examinations Results Analysis | | |
| 50 | Games And Sport Records | | |

APPENDIX II

Data Management Questionnaire (DMQ)

**Department of Educational Admin & Policy Studies,
Delta State University,
P.M.B 1
Abraka
23rd February, 2015**

Dear Respondent,

I am a Post graduate student of the above institution carrying out a research work on Data management and effective administration of secondary schools in Delta State as part of the requirement for the award of Masters of Education (M.Ed.) degree in Educational Administration and Policy Studies. I would be grateful if you could sincerely fill in this questionnaire. Be assured that all information given will be used for academic and research purpose only.

Yours Sincerely,

NAYON, Julie
Researcher

Data Management Questionnaire (DMQ)

Please fill where appropriate and tick where necessary, be rest assured that your responses will be used for research purposes only.

SECTION A: Demographics of Respondents

Name of School: _____

School Location: Urban () Rural ()

Gender: Male () Female ()

Age : Below 30 years () 30- 45years () 45 - 60 years () Please tick as appropriate.

Teaching Experience: Below 10yrs () 10-20yrs () Over 20 years ()

Section B: Data Management Checklist

Please tick the extent to which the following data management tools have been used by you as a school administrator or by your principal as a teacher in secondary school.

| S/N | Data Management Facilities | Very High | High | Low | Very High |
|-----|---------------------------------|-----------|------|-----|-----------|
| 1 | Student Report Form | | | | |
| 2 | Monthly Returns | | | | |
| 3 | Attendance Register | | | | |
| 4 | Admission Register | | | | |
| 5 | Seniority List | | | | |
| 6 | Inspector Report Book | | | | |
| 7 | Visitors Book | | | | |
| 8 | Minutes Of Staff Meeting | | | | |
| 9 | PTA Minutes Book | | | | |
| 10 | Log Book | | | | |
| 11 | Weekly Duty Report Book | | | | |
| 12 | Weekly Diary Of Work | | | | |
| 13 | Conduct Book | | | | |
| 14 | Subject-Teacher Attendance | | | | |
| 15 | Staff Records | | | | |
| 16 | Duty Roster | | | | |
| 17 | Committee Report Book (Student) | | | | |
| 18 | Committee Report Book (Teacher) | | | | |
| 19 | Development/Growth Records | | | | |
| 20 | Health Records | | | | |
| 21 | Family History | | | | |
| 22 | School Time-Table | | | | |

| | | | | | |
|----|--|--|--|--|--|
| 23 | Computer System | | | | |
| 24 | Television Set | | | | |
| 25 | Internet Facility | | | | |
| 26 | Immunization Records | | | | |
| 27 | Participation In School Activities | | | | |
| 28 | Fees Register | | | | |
| 29 | Past Students Records | | | | |
| 30 | Academic performance Records | | | | |
| 31 | Lesson Note And Plan | | | | |
| 32 | Subject Syllabus | | | | |
| 33 | Punishment Record | | | | |
| 34 | Transfer Certificate | | | | |
| 35 | Parents Visit Card | | | | |
| 36 | Skill Acquisition | | | | |
| 37 | Records Of Building | | | | |
| 38 | Records Of PTA Contributions | | | | |
| 39 | Budget Book | | | | |
| 40 | Imp Rest Account Book | | | | |
| 41 | Stock Book/ Inventory | | | | |
| 42 | Cash Book | | | | |
| 43 | Clubs And Associations Book | | | | |
| 44 | Teachers Movement Book | | | | |
| 45 | Teachers Time Book | | | | |
| 46 | Donations By Voluntary Organizations | | | | |
| 47 | Records Of Donations By Parents | | | | |
| 48 | Student – Teachers Record Book | | | | |
| 49 | External Examinations Results Analysis | | | | |
| 50 | Games And Sport Records | | | | |

Section B: Data Management and Administrative Effectiveness (Teachers Only)

What is the rating of your principals' effectiveness in the following areas due to adequate data management?

| S/N | ITEM | Very Effective | Effective | Not Effective |
|-----|----------------------------|----------------|-----------|---------------|
| 1 | Attainment of school goals | | | |
| 2 | Instructional leadership | | | |
| 3 | Evaluation of Teachers | | | |
| 4 | Human resources management | | | |

| | | | | |
|----|--------------------------------------|--|--|--|
| 5 | Safe Environment Maintenance | | | |
| 6 | Orderly environment | | | |
| 7 | Data management | | | |
| 8 | Decision-making based on data | | | |
| 9 | Professional development of teachers | | | |
| 10 | Coordination of school resources | | | |

Section D: Role of ICT in the Utilization of Data Management Tools

Please tick the extent to which you agree with the following statements.

| S/N | ITEM | SA | A | D | SD |
|-----|---|----|---|---|----|
| 1 | My school is not a stranger to ICT facilities | | | | |
| 2 | There are variation of ICT facilities are well provided for in my school | | | | |
| 3 | Computers are the only ICT facilities available in my school | | | | |
| 4 | My school is well equipped with ICT facilities | | | | |
| 5 | Lack of electricity often jeopardizes effective use of ICT facilities and effective record management | | | | |
| 6 | I utilize computers in storing information in my school | | | | |
| 7 | I am ICT literate | | | | |
| 8 | Examination results are processed using ICT facilities in my school | | | | |
| 9 | ICT facilities are used in the exchange of information between teachers | | | | |
| 10 | ICT facilities are mostly used to teach computer studies in my school | | | | |

Section E: Impact of Adequate Data Management in Secondary School Administration

| SN | ITEM | SA | A | D | SD |
|----|--|----|---|---|----|
| 1 | Enhance decision-making in my school | | | | |
| 2 | Promotes effective supervision of teaching in my school | | | | |
| 3 | Promotes objectivity in the discharge of duties in my school | | | | |
| 4 | Provides sound and reliable basis for career guidance | | | | |
| 5 | Gives room for accurate assessment of students achievements | | | | |
| 6 | Provide the basis for adequate assessment of student behaviour | | | | |
| 7 | Promotes an accurate assessment of the teacher | | | | |
| 8 | Makes it easier for my Principal to provide objective information to relevant stakeholders | | | | |
| 9 | Enhances proper planning, coordination, and evaluation of programmes | | | | |
| 10 | Provides legal basis to justify administrative action | | | | |

APPENDIX III
POPULATION AND SAMPLE DISTRIBUTION

Table 3.1: Population of School, Teachers and School Principals of Secondary Schools by Local Government

| S/N | Local Government Areas | Number of Schools | No. of Teachers | No. of School Heads |
|--|------------------------|-------------------|-----------------|---------------------|
| Delta Central Senatorial District | | | | |
| 1. | Ethiope East | 25 | 1296 | 25 |
| 2. | Ethiope West | 21 | 783 | 21 |
| 3. | Okpe | 16 | 73 | 16 |
| 4. | Sapele | 17 | 662 | 17 |
| 5. | Udu | 14 | 750 | 14 |
| 6. | Ughelli North | 12 | 1327 | 12 |
| 7. | Ughelli South | 24 | 1219 | 24 |
| 8. | Uvwie | 16 | 649 | 16 |
| Delta North Senatorial District | | | | |
| 9. | Aniocha North | 19 | 684 | 19 |
| 10. | Aniocha South | 19 | 598 | 19 |
| 11. | Ika North-East | 17 | 1095 | 17 |
| 12. | Ika South | 18 | 803 | 18 |
| 13. | Ndokwa East | 25 | 793 | 25 |
| 14. | Ndokwa West | 20 | 672 | 20 |
| 15. | Oshimili North | 12 | 695 | 12 |
| 16. | Oshimili South | 10 | 626 | 10 |
| 17. | Ukwuani | 13 | 751 | 13 |
| Delta South Senatorial District | | | | |
| 18. | Bomadi | 9 | 92 | 9 |
| 19. | Burutu | 19 | 582 | 19 |
| 20. | Isoko North | 17 | 657 | 17 |
| 21. | Isoko South | 19 | 1143 | 19 |
| 22. | Patani | 9 | 76 | 9 |
| 23. | Warri North | 10 | 433 | 10 |
| 24. | Warri South | 18 | 300 | 18 |
| 25. | Warri South-West | 6 | 420 | 6 |
| Grand total | | 441 | 17, 892 | 441 |

Source: Delta State Post Primary Education Board Asaba, (2015).

Table 3.2: Sample Size Obtained from Stratified Random Sampling of Secondary School Teachers and Principals

| Senatorial District | Local Government | NO. of School Teachers | No of School Teachers Selected | NO. of School Heads | No of School Heads Sampled |
|----------------------------|-------------------------|-------------------------------|---------------------------------------|----------------------------|-----------------------------------|
| Delta North | Aniocha North | 684 | 52 | 19 | 12 |
| | Ndokwa East | 793 | 64 | 25 | 12 |
| | Oshimili North | 695 | 52 | 12 | 6 |
| | Ika North East | 1095 | 70 | 17 | 10 |
| | Ukwuani | 751 | 60 | 13 | 6 |
| Delta South | Ughelli South | 1219 | 70 | 24 | 12 |
| | Udu | 750 | 58 | 14 | 6 |
| | Uvwie | 649 | 50 | 16 | 6 |
| | Sapele | 662 | 50 | 17 | 10 |
| | Ethiope East | 1296 | 70 | 26 | 12 |
| Delta Central | Isoko South | 1143 | 100 | 19 | 12 |
| | Burutu | 92 | 25 | 9 | 12 |
| | Bomadi | 582 | 65 | 19 | 6 |
| | Warri South | 300 | 50 | 18 | 10 |
| | Warri North | 433 | 58 | 10 | 6 |
| Total | | 11, 144 | 894 | 258 | 138 |

Source: Field Work, 2015

APPENDIX IV
COMPUTER PRINTOUT OF RELIABILITY TEST

Correlations

| | | ReliabilityTes t1 | ReliabilityTes t2 |
|----------------------|---------------------|----------------------|----------------------|
| ReliabilityTest 1 | Pearson Correlation | 1 | .758** |
| | Sig. (2-tailed) | | .000 |
| | N | 20 | 20 |
| ReliabilityTest 2 | Pearson Correlation | .758** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 20 | 20 |

**, Correlation is significant at the 0.01 level (2-tailed).

APPENDIX V

COMPUTER OUTPUT OF RESEARCH QUESTION AND HYPOTHESIS ANALYSIS

[DataSet2] C:\Users\user1\Documents\NAYON SPSS CHECK LIST INPUT ITEM SCORE.sav

| | Descriptive Statistics | | | |
|--------------------------|------------------------|---------|--------|----------------|
| | Minimum | Maximum | Mean | Std. Deviation |
| Student Report Form | .00 | 4.00 | 3.3267 | .79296 |
| Monthly Returns | 1.00 | 4.00 | 3.5167 | .77850 |
| Attendance Register | 1.00 | 4.00 | 3.333 | .93744 |
| Admission Register | 1.00 | 4.00 | 3.2800 | .67420 |
| Seniority List | 1.00 | 4.00 | 2.1104 | .86603 |
| Inspector Report Book | 1.00 | 4.00 | 3.0701 | .79772 |
| Visitors Book | 1.00 | 4.00 | 3.3301 | .86603 |
| Minutes Of Staff Meeting | 1.00 | 4.00 | 3.3260 | .86603 |
| PTA Minutes Book | 1.00 | 4.00 | 3.0850 | .86603 |
| Log Book | 1.00 | 4.00 | 2.4130 | .86603 |
| Weekly Duty Report Book | 1.00 | 4.00 | 3.4313 | .79296 |
| Weekly Diary Of Work | 1.00 | 4.00 | 3.277 | .77850 |
| Conduct Book | 1.00 | 4.00 | 3.477 | .77850 |

| | | | | |
|------------------------------------|------|------|--------|--------|
| Subject-Teacher Attendance | 1.00 | 4.00 | 2.7400 | .79772 |
| Staff Records | 1.00 | 4.00 | 3.060 | .67420 |
| Duty Roster | 1.00 | 4.00 | 2.4030 | .67420 |
| Committee Report Book (Student) | 1.00 | 4.00 | 2.5427 | .66856 |
| Committee Report Book (Teacher) | 1.00 | 4.00 | 1.9058 | .79296 |
| Development/Growth Records | 1.00 | 4.00 | 2.607 | .67420 |
| Health Records | 1.00 | 4.00 | 2.3690 | .67420 |
| Family History | 1.00 | 4.00 | 2.4570 | .67420 |
| School Time-Table | 1.00 | 4.00 | 1.9467 | .66856 |
| Computer System | 1.00 | 4.00 | 2.220 | .67420 |
| Television Set | 1.00 | 4.00 | 2.4764 | .77850 |
| Internet Facility | 1.00 | 4.00 | 1.8873 | .79296 |
| Immunization Records | 1.00 | 4.00 | 2.0933 | .65134 |
| Participation In School Activities | 1.00 | 4.00 | 2.4600 | .79296 |
| Fees Register | 1.00 | 4.00 | 2.3523 | .77850 |
| Past Students Records | 1.00 | 4.00 | 2.4301 | .93744 |
| Academic performance Records | 1.00 | 4.00 | 1.9603 | .67420 |
| Lesson Note And Plan | 1.00 | 4.00 | 2.4278 | .86603 |
| Subject Syllabus | 1.00 | 4.00 | 2.6512 | .79772 |
| Punishment Record | 1.00 | 4.00 | 2.3901 | .86603 |
| Transfer Certificate | 1.00 | 4.00 | 2.5201 | .86603 |
| Parents Visit Card | 1.00 | 4.00 | 2.246 | .86603 |

| | | | | |
|--|------|------|--------|--------|
| Skill Acquisition | 1.00 | 4.00 | 2.5278 | .86603 |
| Records Of Building | 1.00 | 4.00 | 2.4891 | .79296 |
| Records Of PTA Contributions | 1.00 | 4.00 | 1.9100 | .77850 |
| Budget Book | 1.00 | 4.00 | 2.4081 | .77850 |
| Imp Rest Account Book | 1.00 | 4.00 | 1.9081 | .79772 |
| Stock Book/ Inventory | 1.00 | 4.00 | 2.5437 | .67420 |
| Cash Book | 1.00 | 4.00 | 1.9181 | .67420 |
| Clubs And Associations Book | 1.00 | 4.00 | 2.0010 | .66856 |
| Teachers Movement Book | 1.00 | 4.00 | 3.2446 | .79296 |
| Teachers Time Book | 1.00 | 4.00 | 3.261 | .67420 |
| Donations By Voluntary Organizations | 1.00 | 4.00 | 2.301 | .67420 |
| Records Of Donations By Parents | 1.00 | 4.00 | 2.1709 | .67420 |
| Student – Teachers Record Book | 1 | 4 | 2.5261 | .66856 |
| External Examinations Results Analysis | 1 | 3 | 2.9672 | .67420 |
| Games And Sport Records | 1 | 3 | 2.6217 | .77850 |

DESCRIPTIVES VARIABLES=Item1 Item2 Item3 Item4 Item5 Item6 Item7 Item8 Item9
Item10 Item11 Item12 Item13 Item14 Item15 Item16 Item17 Item18 Item19 Item20
Item21 Item22 Item23 Item24 Item25 /STATISTICS=MEAN SUM STDDEV VARIANCE.

| | N | Mean | Std. Deviation | Variance |
|--------------------|-----|--------|----------------|----------|
| Item1 | 866 | 3.5524 | .69888 | .488 |
| Item2 | 866 | 2.7692 | 1.03931 | 1.080 |
| Item3 | 866 | 3.0839 | .78270 | .613 |
| Item4 | 866 | 2.9860 | .94187 | .887 |
| Item5 | 855 | 2.8601 | .89286 | .797 |
| Item6 | 866 | 3.0140 | .85569 | .732 |
| Item7 | 866 | 3.1329 | .94375 | .891 |
| Item8 | 866 | 2.9161 | 1.01048 | 1.021 |
| Item9 | 866 | 2.9580 | .92595 | .857 |
| Item10 | 866 | 3.3077 | .78031 | .609 |
| Valid N (listwise) | | | | |

```
DESCRIPTIVES VARIABLES=item1 item2 item3 item4 item5 item6 item7 item8
item9 item10 /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|--------------------|---------|---------|--------|----------------|
| item1 | 866 | 1.00 | 4.00 | 3.0956 | .97281 |
| item2 | 866 | 1.00 | 4.00 | 2.2206 | .94822 |
| item3 | 866 | 1.00 | 4.00 | 2.6889 | 1.08219 |
| item4 | 866 | 1.00 | 4.00 | 2.5882 | 1.07821 |
| item5 | 855 | 1.00 | 4.00 | 2.5221 | 1.07474 |
| item6 | 866 | 1.00 | 4.00 | 1.9926 | .98871 |
| item7 | 866 | 1.00 | 4.00 | 2.3603 | 1.12660 |
| item8 | 866 | 1.00 | 4.00 | 2.8889 | 1.10404 |
| item9 | 866 | 1.00 | 33.00 | 3.0956 | 2.76721 |
| item10 | 866 | 1.00 | 4.00 | 3.1259 | .97299 |
| Valid N (listwise) | 10 items listed | | | | |

```
DESCRIPTIVES VARIABLES=item1 item2 item3 item4 item5 item6 item7 item8
item9 item10 /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|--------------------|---------|---------|--------|----------------|
| item1 | 866 | 1.00 | 4.00 | 3.0956 | .97281 |
| item2 | 866 | 1.00 | 4.00 | 2.2206 | .94822 |
| item3 | 866 | 1.00 | 4.00 | 2.6889 | 1.08219 |
| item4 | 866 | 1.00 | 4.00 | 2.5882 | 1.07821 |
| item5 | 855 | 1.00 | 4.00 | 2.5221 | 1.07474 |
| item6 | 866 | 1.00 | 4.00 | 1.9926 | .98871 |
| item7 | 866 | 1.00 | 4.00 | 2.3603 | 1.12660 |
| item8 | 866 | 1.00 | 4.00 | 2.8889 | 1.10404 |
| item9 | 866 | 1.00 | 33.00 | 3.0956 | 2.76721 |
| item10 | 866 | 1.00 | 4.00 | 3.1259 | .97299 |
| Valid N (listwise) | 10 items listed | | | | |

DESCRIPTIVES VARIABLES=item1 item2 item3 item4 item5 item6 item7 item8
item9 item10 /STATISTICS=MEAN STDDEV MIN MAX.

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|--------------------|---------|---------|--------|----------------|
| item1 | 866 | 1.00 | 4.00 | 3.0956 | .97281 |
| item2 | 866 | 1.00 | 4.00 | 2.2206 | .94822 |
| item3 | 866 | 1.00 | 4.00 | 2.6889 | 1.08219 |
| item4 | 866 | 1.00 | 4.00 | 2.5882 | 1.07821 |
| item5 | 855 | 1.00 | 4.00 | 2.5221 | 1.07474 |
| item6 | 866 | 1.00 | 4.00 | 1.9926 | .98871 |
| item7 | 866 | 1.00 | 4.00 | 2.3603 | 1.12660 |
| item8 | 866 | 1.00 | 4.00 | 2.8889 | 1.10404 |
| item9 | 866 | 1.00 | 33.00 | 3.0956 | 2.76721 |
| item10 | 866 | 1.00 | 4.00 | 3.1259 | .97299 |
| Valid N (listwise) | 10 items listed | | | | |

CORRELATIONS

/VARIABLES=Data management School Administration
/PRINT=TWOTAIL NOSIG
/Nayon Hypothesis
/MISSING=PAIRWISE.

Correlations

Descriptive Statistics

| | Mean | Std. Deviation | N |
|--------------------------|--------|-------------------|------|
| Data Management | 1.6067 | .50099 | 1004 |
| School Administartion | 2.3981 | .30440 | 1004 |

Correlations

| | | Data Management | School Administration |
|------------------|---------------------|-----------------|-----------------------|
| Facility | Pearson Correlation | 1 | .437 |
| | Sig. (2-tailed) | | .317 |
| | N | 30 | 30 |
| AchievementFac i | Pearson Correlation | -.039 | 1 |
| | Sig. (2-tailed) | .317 | |
| | N | 30 | 30 |

CORRELATIONS

/VARIABLES=ICT Role DataToolsUtilization
 /PRINT=TWOTAIL NOSIG
 /STATISTICS DESCRIPTIVES
 /MISSING=PAIRWISE.

Correlations

Descriptive Statistics

| | Mean | Std. Deviation | N |
|-------------|--------|----------------|----|
| Motivation | 2.9333 | .31331 | 30 |
| Achievement | 2.3981 | .30440 | 30 |

Correlations

| | | ICTRole | DataToolsutili zation |
|-------------|---------------------|---------|--------------------------|
| Motivation | Pearson Correlation | 1 | .512** |
| | Sig. (2-tailed) | | .004 |
| | N | 1004 | 30 |
| Achievement | Pearson Correlation | .512** | 1 |
| | Sig. (2-tailed) | .004 | |
| | N | 1004 | 30 |

**, Correlation is significant at the 0.01 level (2-tailed).

T-Test

[DataSet3] C:\Users\user1\Documents\Nayon Data\Nayon Hypothesis Input III.sav

Group Statistics

| Locati on | | N | Mean | Std. Deviation | Std. Error Mean |
|--------------|-------|-----|--------|-------------------|--------------------|
| Location | Urban | 498 | 31.437 | 9.357985 | .36867 |
| | Rural | 506 | 28.071 | 11.117875 | .44038 |

Independent Samples Test

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|--------------|---|-------|------------------------------|--------|-----------------|-----------------|-----------------------|--------|---|--------|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper | |
| PeerTutoring | Equal variances assumed | 3.277 | .075 | 1.523 | 1002 | .073 | -3.35821 | .61007 | -1.77811 | .66169 |
| | Equal variances not assumed | | | -1.072 | 1001.969 | .07267 | -3.35821 | .57433 | -1.70666 | .59023 |