



Principals' Record Keeping Practices For Enhanced Administrative Effectiveness In Public Senior Secondary Schools In Rivers State

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ABSTRACT

The study examined principals' record keeping practices for enhanced administrative effectiveness in public senior secondary schools in Rivers State. Two research questions and two hypotheses were used for the study. The study adopted descriptive survey research design. The population of the study was 276 principals consisting of 224 males and 52 females from 276 Public Senior Secondary Schools in Rivers State. A sample size of 268 principals was derived using stratified random sampling technique. The instrument was a self-structured questionnaire titled, "Principals' Record Keeping Practices for Enhanced Administrative Effectiveness Questionnaire", validated by two experts in the Departments of Measurement and Evaluation and Educational Management. Cronbach's Alpha was used to establish the reliability of each cluster of the instrument which gave reliability indexes of 0.99 and 0.91. Mean and standard deviation were used to answer the research questions, while the hypotheses were tested using the z-test statistical tool at 0.05 level of significance. Results showed that computer and cloud storage are principal's record keeping practices for enhanced administrative effectiveness in public senior secondary schools in Rivers State. Based on the findings of the study it was recommended among others that principals should train teachers on the use of cloud storage for mobility and accessibility of data from anywhere in the world.

Keywords: Record Keeping, Computers, Cloud Storage

INTRODUCTION

Nations of the world give high premium to education and their established schools generally. This is based on the fact that schools are established to achieve certain objectives for the society in which they are situated. These objectives can only be achieved through effective school administration and an important aspect of school administration that aids in the attainment of school goals is record keeping. Record keeping is very important in school administration because it affects all other aspects of school administration such as planning, budgeting, staffing, facilities, discipline and so on (Alabi, 2017). The process of procurement, storage and auditing require record keeping. At any level of schooling, keeping of records boosts the administrative effectiveness of such schools.

The keeping of school records was enshrined in the Public Education Edict of 1974. The edict stipulated that at every public or private institution, records and books shall be kept by the person in charge and produced at the request of an inspecting officer or manager (Koko & Nwiyi, 2019). Under the education law, there are two types of school records that a school is authorized to keep. These are statutory and non-statutory school records. Statutory school records are those records that are mandatory under education law to be kept by each school viz: admission register, class attendance register, syllabus, lesson note, scheme of work, diary, time table, visitors' book, log book, staff record book, corporal punishment book

and so on (Gede, 2011). On the other hand, non-statutory school records are those records not required by law to be kept, but are kept because they provide useful source of information not only for members of the school community but for people outside the school system as pointed out by Peretomode (2000). For example, in schools, employers may be interested in having particular information about students' scholastic achievement; parents may be interested in knowing how their children behave and perform in the school and alumni may require some information for registering in tertiary institutions. It was further observed that auditors may be interested in checking details of financial transactions; inspectors may need to go through the record of work of a particular teacher who is facing disciplinary action, and the principal may need to collate some information about a student or member of staff to back up a case they are putting across to the school board, etcetera (Ibid, 2000). Such records include duty roaster, staff movement book, school calendar, cash book, fees register, inventory book, record of club activities, ex-student report file etcetera. Therefore, because of their usefulness, school records should be easily accessible but at the same time kept safely where they cannot be easily destroyed by weather conditions and pests.

There is no gain-saying that records are an integral part of any viable organization. The success and failure of any organization is dependent on record keeping. Coincidentally, in the 21st Century, it is no more necessary for organizations to keep records in files and drawers for fear of being vulnerable to destruction by rodents, fire, flood and the like. Proper record keeping in the 21st Century is done electronically, as an enhanced information management system which involves the use of electronic devices such as computers, CD Roms, flash drives, etcetera. Information Management System makes record keeping reliable, authentic and usable as long as the record is needed. Despite the importance of record keeping in schools, records are still traditionally kept on pieces of papers stocked away in files, which are parked inside drawers, lockers, book shelves and boxes. These forms of record keeping in schools have been observed to be detrimental to school records as they are in danger of being destroyed by pests, rodents, fire out-break, rain, flooding, theft, and eventual loss (Mcleod, Hare & Johare, 2004). The implication being that the education industry is bound to be deprived of useful information if traditional methods of record keeping persist in secondary schools.

In the 21st Century there is a clarion call for schools globally to embrace Information and Communication Technology for storing and disseminating information. Schools are becoming increasingly complex in all ramifications in terms of staff and student population, programmes and activities as well as the increasing need for accurate planning and improved outputs. These afore listed indices require improved methods of keeping, storing and retrieving school records for effective school administration. Based on the afore, the study unravelled principals' record keeping practices for administrative effectiveness in public senior secondary schools in Rivers State.

Concept of Record Keeping

Record keeping is the act of creating and maintaining records in organizations such as schools, banks, hospitals and other service and non-service organizations. Such records give a lot of information about those organizations that enable the authorities take goal oriented decisions and assess the progress of the organization at a glance or holistically. Record keeping is vital to the school system as it generates its information and experiences influx of information and an outflow of the same to the society which demands accountability. In the words of Ibara (2010), without records, there can be no accountability.

Dale and Cory (2021) defined a record keeping device as any type of computing hardware that is used for storing, porting or extracting data files and objects. Record keeping devices can hold and store information both temporarily and permanently. Garry and Dave (2021), viewed record keeping as collective methods and technologies that capture and retain digital information on electromagnetic, optical or silicon-based record keeping media.

There are two different types of record keeping devices namely the primary record keeping device and the secondary record keeping device. The primary record keeping devices are generally smaller in size; designed to hold data temporarily and are internal to the computer. They have the fastest data access speed, and these type of devices include RAM and cache memory (Dale & Cory, 2021). The Secondary

record keeping devices usually have larger record keeping capacity, and they store data permanently. These type of devices include the hard disk, the optical disk drive and USB record keeping device (Ryan, Ian, Tracy-Lee, & Mohana, 2020).

Principals' Record Keeping with Computers for Effective Administration

Computers do not work in isolation but with human intervention. They are electronic machines that undergo three processes: input, transformation and output. These processes are actualised by human manipulations. It serves the purpose of information storage, retrieval and use at any point in time and relevance. These functions have made the use of the computer so paramount in all institutions including schools. A computer is also viewed as a machine that performs tasks and calculations based on a set of instructions or program operations (<https://askthecomputerech.com>).

Norton (2021) defined a computer as a programmable machine which responds to a specific set of instructions in a well-defined manner and execute pre-recorded list of instructions. Modern computers are said to be electronic and digital consisting of machinery wires, transistors and circuits referred to as hardware and the instructions and data called software. All the definitions are pointers to the fact that computers cannot be operated in isolation but with the aid of human intervention. The emphasis on the use of technology in schools have also initiated the utilization of computers in school record keeping by school administrators for the effectiveness of their day to day activities. Egwunyenga (2000) asserted that good school records when properly and effectively kept provide information for teachers, counsellors, curriculum planners and instructional supervisors for planning and implementing instructional and administrative activities. Independent studies by researchers have shown co-relationships between the use of electronic record keeping and administrative effectiveness. Onweh, Etim and Emang (2012) in their study on the relationship between record keeping and administrative effectiveness in secondary schools in Akwa Ibom State Nigeria, found a relationship between academic record keeping and administrative effectiveness as well as adequate financial record keeping and administrative effectiveness. This study unraveled the fact that there is the need to judiciously use computers in principal's record keeping in the public senior secondary schools in Nigeria.

Financial school records are concerned with the recording and management of schools' money. These records show the total amount the school has in terms of income and how much has been expended as regards the development of the school. If these records are adequately kept, for example, in flash drives, CD Roms, or in the computer hard disks, they will save the school administrator from unnecessary mismanagement of funds. In addition, Oluwole and Ivagher (2015) identified some of these records to include the school budget, school fee register, impress account, the ledger or cash book and farm record.

The general aim of school administration is the improvement of teaching and learning through the provision of quality instructional materials (Adu & Ngulube, 2017). To achieve this aim, there is the need for school impress for the day-to-day administration of schools. According to Oluwole and Ivagher (2015), this money is intended to cover the day-to-day expenses which unit heads will necessarily incur. It was also reiterated that, an impress holder has to account for all payments made with supporting bills and receipts. This infers that an impress account provides adequate record of expenditure and aids in proper accounting and full understanding of the school budget.

Similarly, the cash book is another tool for financial record keeping in schools. It is defined as a financial journal that contains all cash receipts and disbursements, including bank deposits and withdrawals. Entries in the cash book are then posted into the general ledger (Bello, 2010). However in schools, the school cash book records income and expenditure of the school. This record is kept by the school bursar and occasionally checked by government auditors or inspectors (Idoka in Oluwole & Ivagher, 2015). The cash book or ledger provides information to the government and school administrator on how much money comes in and how much that is expended in carrying out school activities.

Furthermore on the issue of financial record keeping in schools, Oluwole and Ivagher (2015) stressed that each record has its importance in helping to determine how school programmes will be planned. A major observation of how financial records of schools affect administrative effectiveness is on dissemination of information and financial accountability of the school principals to all stakeholders of

the education industry. Gama (2010) in support of the afore view stated that universal education board through the local education authority should provide additional storage facilities to the schools to enable them preserve their records for posterity, and concluded that since records are better generated and preserved using computers, the authorities should provide the facility in schools.

Financial record is very important in school administration. It is therefore of great importance to have financial school records of how school money is generated and how it is spent with the receipts of articles bought well intact for citing. This helps in clearing the head of any suspicion or accusations leveled against him on financial mismanagement (Owo & Nweze, 2014).

Principals' Financial Record Keeping with Cloud Storage for Effective Administration

Cloud storage is a tool for business owners and consumers to save data securely online so that it can be accessed anytime from any location and easily shared with those who are granted permission. Cloud storage also backs up data to facilitate recovery off-site. Today, individuals have access to several free cloud computing services such as Google drive, Dropbox, and Box, which come with upgraded subscription packages that offer larger storage sizes and additional cloud services. Cloud storage has grown increasingly popular among individuals who need larger storage space and for businesses seeking an efficient off-site data back-up solution. Due to cloud storage's increasing popularity and use, cloud security has become a major concern to protect data integrity, prevent hacking attempts, and avoid file or identity theft (Jake & Khadija, 2021).

In the view of Krishna (2019) and Samman and Smug (2021), it is a way of storing data online instead of a local computer but through a cloud computing provider who manages and operates record keeping as a service. It requires an internet connection in order to upload, modify, and share documents, presentations, spreadsheets, images, audio, video, etcetera with others. Cloud storage is a model of computer data storage in which the digital data is stored in logical pools, said to be on "the cloud". The physical storage spans through multiple servers (sometimes in multiple locations), and the physical environment is typically owned and managed by a hosting company. These cloud storage providers are responsible for keeping the data available and accessible, and the physical environment protected and running.

Cloud storage stores and moves data in a secure and safe manner, thereby allowing principals to keep their files stored with the cloud services provider for on-demand access on any of their devices. Cloud storage can also be used to archive data that requires long-term storage that does not need to be accessed frequently, such as certain financial records. Increasingly, files stored "in the cloud" are utilized for group collaboration. It is delivered on demand with just-in-time capacity and costs and eliminates buying and managing a record keeping infrastructure (Samman & Smug, 2021).

In schools, cloud storage could be efficiently and effectively used by principals to enhance administrative effectiveness. Also, the latest school management system currently available, affords school administrators to automate their files into a system that allow them access them conveniently. It saves labour and effort to retrieve a record no matter the number of years it has been kept at the click of a button. Therefore, a school administrator does not need to keep large files in a large room and consume more paper. What the administrator needs is to integrate technology into the school system and work smart and not necessarily hard as the technology permits access to files every time they need them even when they are not in the school premises (Falana, 2018).

Statement of the Problem

Prior to the introduction of the 21st record keeping tools (through the use of Information and Communication Technology) in secondary schools; principals' in Nigeria and other developing countries stored school records mainly on papers stocked in files, which were packed inside drawers, lockers, book shelves and boxes. This type of school record keeping practice exposed important school records to destruction by pests, termites, cockroaches, rodents, rainfall, flooding, pilfering, fire outbreaks and eventual loss. In the 21st century, it is expected that record keeping in secondary schools should be done electronically using computers and cloud storage. Unfortunately, it is perceived that most public secondary school principals in Rivers State seem not to adopt information management system, which involves the use of cloud storage, flash drive, memory cards, CD Roms, flash drives, audio recorders, and

other information management devices for proper record keeping to improve on their administrative tasks. Giving credence to the above statement Amie-Ogan and Osuji (2016), posited that the twenty-first century is an era of global use of digital technologies by institutions and business organizations in order to have a competitive advantage over their rivals in the labour market. If principals must remain relevant in secondary school administration, their mode of record keeping ought to be reversed in keeping with best global practices for safety and accountability.

It was against this background that the study investigated computers and cloud storage as principals' record keeping practices for enhanced principals' administrative effectiveness in public senior secondary schools in Rivers State.

Purpose of the Study

The purpose of the study was to investigate principals' record keeping practices for enhanced administrative effectiveness in public senior secondary schools in Rivers State. Specifically, the study sought to:

1. determine the ways principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State.
2. examine how principals' financial record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State.

Research Questions

1. What are the ways principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State?
2. How do principals' financial record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State?

Hypotheses

Ho₁ There is no significant difference between the mean opinion scores of male and female principals on the ways principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State.

Ho₂ There is no significant difference between the mean opinion scores of experienced and inexperienced principals on how principals' financial record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State.

METHODOLOGY

The research design used for this study was the descriptive survey design. The population of the study was 276 principals consisting of 224 males and 51 females from the 276 public senior secondary schools in Rivers State. A sample size was 268 principals consisting of 221 males and 47 females was achieved through the use of stratified random sampling technique. A self-developed questionnaire titled: "Principals' Record Keeping Practices For Enhanced Administrative Effectiveness Questionnaire (PRKPEAEQ)" was used to elicit data from the respondents. The instrument was validated by two experts in the Departments of Educational Management and Measurement and Evaluation. The instrument had two (2) sections: Sections A and B. Section A consisted of demographic information while Section B contained questionnaire items based on the research questions. The response scale was structured on a 4-point Likert rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with values of 4, 3, 2 and 1 respectively. Cronbach's Alpha was used to test the reliability of the instrument which gave reliability indexes of 0.99 and 0.91. Mean and standard deviation were used to answer the research questions with a criterion mean of 2.50. Questionnaire items with mean opinion scores below 2.50 denoted 'Disagreed' while 2.50 and above signified 'Agreed'. The hypotheses were tested using z-test statistics at 0.05 level of significance. Analyzed data with calculated z-values above the z-critical value of ± 1.96 were rejected and below ± 1.96 were accepted.

Research Question 1: *What are the ways principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State?*

Table 1: Mean Opinion Scores of Male and Female Principals' on Ways Principals' Record Keeping With Computers Facilitate Administrative Effectiveness in Public Senior Secondary Schools in Rivers State.

S/N	Items	Male Principals N=221			Female Principals N= 47		
		(\bar{X})	Std	Decision	(\bar{X})	Std	Decision
1.	Record keeping with computer's hard drive in schools boosts academic and financial record keeping	2.52	0.90	Agree	2.51	0.49	Agree
2	Record keeping in schools with flash drive helps to provide useful information on the academic progress and development of students	2.75	0.73	Agree	2.80	0.82	Agree
3.	Record keeping in schools with memory card helps in planning and budgetary purposes	2.47	0.81	Disagree	2.46	0.31	Disagree
4.	Record keeping in schools with CD Rom helps in making information readily available to employers of labour and stakeholders	2.74	0.52	Agree	2.70	0.39	Agree
5.	Record keeping with cloud storage in schools provide information for assessment of teachers, students and school financial accounts	2.80	0.20	Agree	2.78	0.90	Agree
Grand Mean/SD		2.66	0.63	Agree	2.65	0.58	Agree

Source: Field Survey, 2021

The results on table 1 revealed that questionnaire items 1, 2, 4 and 5 had mean values of 2.52, 2.75, 2.74 and 2.80 for male principals and 2.51, 2.80, 2.70 and 2.78 for female principals while questionnaire item 3 had mean values of 2.47 for male principals and 2.46 for female principals. The grand mean score for both male and female principals on the table were above the criterion mean which implies that male and female principals agreed that principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State.

Research Question 2: *How do principals' financial record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State?*

Table 2: Mean Opinion Scores of Experienced and Inexperienced Principals' on How Principals' Record Keeping With Cloud Storage Facilitate Administrative Effectiveness in Public Senior Secondary Schools in Rivers State.

S/N	Items	Experienced Principals N=169			Inexperienced Principals N=99		
		(\bar{X})	Std	Decision	(\bar{X})	Std	Decision
1.	Record keeping with cloud storage helps in decision making in schools	2.79	0.99	Agree	2.82	0.85	Agree
2.	Financial record keeping with cloud storage in schools help principals in accountability purposes	2.55	0.67	Agree	2.57	0.80	Agree
3.	Financial record keeping with cloud storage in schools help principals to organize school finances	2.63	0.12	Agree	2.60	0.25	Agree
4.	Cloud storage helps in having details of all school income and expenditure	2.77	0.52	Agree	2.80	0.35	Agree
5.	Financial record keeping with cloud storage help principals to show stock levels in schools	2.55	0.61	Agree	2.51	0.24	Agree
6.	Financial record keeping with cloud storage stores school financial information for auditing purposes	2.90	0.30	Agree	2.89	0.33	Agree
7.	Financial record keeping with cloud storage aid in planning areas of financial needs in schools.	2.77	0.99	Agree	2.80	0.85	Agree
Grand Mean		2.71	0.60	Agree	2.71	0.52	Agree

Source: Field Survey, 2021

The results on table 2 revealed that questionnaire items (6-12) had mean values of 2.79, 2.55, 2.63, 2.77, 2.55, 2.90 and 2.77 for experienced principals and 2.82, 2.57, 2.60, 2.80, 2.51, 2.89 and 2.80 for inexperienced principals. Again, the grand mean scores on the table were above the criterion mean of 2.50 which implied that experienced and inexperienced principals agreed that principals' record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State.

Hypotheses

Ho₁ There is no significant difference between the mean opinion scores of male and female principals on the ways principals' record keeping with computers facilitate effective administrative effectiveness in public senior secondary schools in Rivers State.

Table 3: z-test Analysis of Difference Between the Mean Opinion Scores of Male and Female Principals' on Ways Principals' Record Keeping With Computers Facilitate Administrative Effectiveness in Public Senior Secondary Schools in Rivers State.

Gender	N	\bar{X}	Std	Df	z-Cal	z-Crit.	LS	Decision
Male Principals	221	2.66	0.63	266	0.45	± 1.96	0.05	Ho ₁ : Failed to Reject No Significant Difference
Female Principals	47	2.65	0.58					

Source: Field Survey, 2021

Data on table 3 above shows a z-calculated value of 0.45, which was less than the z-critical value of ± 1.96 at 0.05 level of significance and 266 degree of freedom. Since the z-calculated value of 0.45 was less than the z-critical value of ± 1.96 , the null hypothesis was accepted which states that there is no significant

difference between the mean opinion scores of male and female principals on the ways principals' record keeping with computers facilitate effective administrative effectiveness in public senior secondary schools in Rivers State.

Ho₂ There is no significant difference between the mean opinion scores of experienced and inexperienced principals on how principals' financial record keeping with cloud storage facilitates administrative effectiveness in public senior secondary schools in Rivers State.

Table 4: z-test Analysis of Difference Between the Mean Responses of Experienced and Inexperienced Principals' on How Principals' Record Keeping With Cloud Storage Facilitates Administrative Effectiveness in Public Senior Secondary Schools in Rivers State.

Class	N	\bar{X}	Std	Df	z-Cal	z-Crit.	LS	Decision
Experienced Principals	169	2.71	0.60	266	0.72	± 1.96	0.05	Ho ₂ : Failed to Reject No Significant Difference
Inexperienced Principals	99	2.71	0.52					

Source: Field Survey, 2021

Data on table 4 above shows a z-calculated value of 0.72, which was less than the z-critical value of ± 1.96 at 0.05 level of significance and 266 degree of freedom. Since the z-calculated value of 0.72 was less than the z-critical value of ± 1.96 , the null hypothesis was accepted which states that there is no significant difference between the mean opinion scores of experienced and inexperienced principals on how principals' financial record keeping with cloud storage facilitate administrative effectiveness in public senior secondary schools in Rivers State.

DISCUSSION OF FINDINGS

Findings on research question 1 on table 1 revealed that male and female principals agreed that principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State with grand mean values of 2.66 and 2.65. Hypothesis 1 on table 3 also showed that there is no significant difference between the mean opinion scores of male and female principals on the ways principals' record keeping with computers facilitate administrative effectiveness in public senior secondary schools in Rivers State with z-calculated value of 0.45 which was less than z-critical value of ± 1.96 . This finding is in agreement with Gama (2010) who posited that the State Universal Education Board through the Local Education Authority should provide additional storage facilities in schools to enable them preserve their records for posterity, and concluded that since records are better generated and preserved using computers, the authorities should provide the facility in schools. In addition Garry and Dave (2021) opined that record keeping with the computer captures and retains digital information on electromagnetic, optical or silicon-based recording keeping media for future use which invariably would enhance school administrators' effectiveness.

Findings on research question 2 on table 2 revealed that experienced and inexperienced principals agreed that principals' record keeping with cloud storage facilitates administrative effectiveness in public senior secondary schools in Rivers State with grand mean values of 2.71 and 2.71. Hypothesis 2 on table 4 also showed no significant difference between the mean opinion scores of experienced and inexperienced principals on how principals' financial record keeping with cloud storage facilitates administrative effectiveness in public senior secondary schools in Rivers State with z-calculated value of 0.72 which was less than z-critical value of ± 1.96 . The finding corroborated with Samman and Smug (2021) who noted that cloud storage is a cloud computing model that stores data on the Internet through a cloud computing provider that manages and operates record keeping as a service. It is delivered on demand with just-in-time capacity and costs, and eliminates buying and managing a record keeping infrastructure. It thus allows principals to keep their files stored with the cloud service provider and on-demand is retrieved and accessed easily. The finding is also in line with Falana (2018) who was of the view that the school administrator does not need to keep large files in a large room and consume more paper but what the

administrator needs is to integrate technology into the school system and work smart and not necessarily hard. Moreover, the technology is cloud-based, meaning they can access their files any time they need them even when they are not in the school premises.

CONCLUSION

Based on the findings of the study, it was concluded that record keeping with computers and cloud storage aid administrative effectiveness in public senior secondary schools in Rivers State.

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

1. The State government should supply the necessary electronic and digital record keeping devices such as computers and their accessories to all senior public secondary schools in Rivers State. This could be done by providing funds for the purchase and maintenance of ICT facilities and accessories.
2. Principals should use cloud storage for financial record keeping in public senior secondary schools in Rivers State for accountability, mobility and accessibility of data from anywhere in the world.

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