



Effect of Secondary School Principals' Record-Keeping Practice on Administrative Effectiveness in Delta State, Nigeria

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Abstract. This study's goal was to examine the effects of principals' record-keeping procedures on the management of public secondary schools in Delta State, Nigeria. The research design used in this study was descriptive. 473 public high school principals from the Delta region participated in the survey. By using stratified random sampling, 150 principals (100 men and 50 women) were selected as a sample. Two research questions and two hypotheses served as the foundation for conducting this investigation. A self-structured instrument titled "Principals Recording Keeping Practices for Enhanced Administrative Efficiency Questionnaire" (PRKPEAEQ), is the name of the instrument. Two professionals validated the scale. Internal consistency was assessed using Cronbach's alpha, and the two groups' reliability indices were 0.81 and 0.85, respectively. Utilizing the direct application method, the researcher(s) collaborated with three research assistants to gather the data. The study questions were answered using the mean and standard deviation, and a chi-square probability table was employed to assess the null hypotheses at the 0.05 level of significance. The results demonstrate that school administrators are using computers and cloud storage as management tools to enhance the efficiency of Delta Public Secondary Schools. The Ministry of Education should advise school administrators to use computers and cloud storage, among other things, according to the conclusions.

1. Introduction

The lives of its residents must be transformed and improved by education in every nation on earth. This is so that people can acquire the knowledge and skills necessary to contribute to society. Institutions for education are places where teaching and learning take place in order to change education as desired. Only

effective administration will allow for the achievement of the school's construction aim. Only through effective governance can schools accomplish their objectives (Alabi, 2018).

Good school management can be seen in many different ways. Good student test results, an effective teaching staff, high school admissions, leadership, high school graduates enrolling in college, etc. have little impact, but excellent school administration is reflected in teacher motivation (Owan et al., 2019). The optimal use of people, money, time, energy, and resources is another benefit of successful school administration, which leads to good and desired results (Semiwoliba et al., 2017). All of them indicate that effective school management occurs through student higher education, staff and student collaboration and discipline, good teaching practices, efficient use of available resources, and good public relations. But managing schools properly and efficiently is impossible without maintaining accurate and pertinent records.

The Public Education Act of 1974 governs the retention of educational records. According to the legislation, all schools, whether public or private, must maintain records and documentation and make them available to clients upon request (Koko and Nwiyi, 2019). The Education Act gives schools the right to store two types of records. These are statutory and non-statutory records. Statutory records are those records that are mandatory under the educational law. These include class attendance registers, syllabus admission register, lesson plans / tutorial books, handbooks, curricula, timetables, guests' books, directories, staff registers, and corporal punishment registers (Gede, 2011). Non statutory records are records that are not required by law but are kept to provide important information to school members as

well as outsiders (Peretomode, 2000). These include duty roster, staff movement book, school calendar, cash book, fees register, inventory books, record of club activities and so on.

Because data is an integral part of any organization, it must be stored in a location that is not easily damaged by weather and disease. Likewise, organizations in the 21st century experience fires, floods, and more. In the 21st century, with the development of information management using electronic devices such as computers, CDs and flash drives, records are stored electronically. This ensures that the information is reliable, accurate and available for as long as needed. However, despite the importance of record keeping in schools, most school administrators still keep records in archives stored in drawers, shelves, racks, and drawers. It has been found that data stored in these schools can be destroyed by viruses, fires, floods, rats, thieves, disappearances, etc which can compromise school data. (McLeod *et al*, 2004).

In the 21st century, schools are increasingly adopting information and communication technologies to store and disseminate information. The number of schools, staff and students is increasing. As the number of schools, employees and students grows, so does the need for adequate planning and improvement of outcomes, as well as all subsequent repercussions in terms of programs and activities. As a result, the purpose of this research is to investigate the effects of principals' record keeping practices on the effectiveness of secondary school management in Delta State.

1.1 Statement of the Problem

There appears to be an alarming rate of misplacement or loss of vital records in Delta State secondary schools, as well as a delayed rate at which critical information is collected and stored. Despite the importance of school records in achieving educational goals, school administrators continue to maintain school records mostly on paper stocked in folders that are crammed within drawers, lockers, book shelves, and boxes (Osakwe, 2011). This type of record keeping puts crucial records at risk of destruction due to pests, rats, rain, termites, flooding, fire outbreaks, pilfering, and eventual loss.

In this day and age, it is anticipated that school records be kept electronically using computers and cloud storage. Unfortunately, it has been noticed that the majority of public secondary schools Delta State school principals are not implementing an information management system that entails the use of cloud storage, flash drives, memory cards, CD Roms, and

other information management devices for proper record keeping. In reality, if secondary school leaders are to be involved, their retention methods should be based on security and international responsibility. Based on the foregoing, this study will investigate the impact of school principals' computer and cloud storage apps on school level administration in Nigeria's Delta state.

1.2 Objectives of the Study

The overall goal of this study was to investigate the impact of school administrators' record keeping practices on secondary school administration in Delta state. The research will, in particular:

- Investigate how principals' record-keeping practices using computers would improve administrative performance in Delta State's public secondary schools.
- Determine how school principals' record-keeping practices employing cloud storage would improve administrative performance in Delta State's public secondary schools.

1.3 Research Questions

The study was guided by the following research questions:

- How do school principals' use of computers for record keeping aid administrative success in Delta State's public secondary schools?
- How does the use of cloud storage by school principals facilitate administrative success in Delta State's public secondary schools?

1.4 Hypotheses

The following theories were put to the test:

- There is no significant difference between male and female school principals in how school principals' record keeping practice with computers facilitates administrative effectiveness in Delta State public secondary schools
- There is no significant difference between male and female school principals in how record keeping practices with cloud storage enhance administrative effectiveness in Delta state public secondary schools.

2. Conceptual Structure

2.1 Keeping School Records

One of the foundations for effective school administration is good record keeping in schools. Records are initially stored in school inside files, file cabinets, or on the desk for successful teaching and learning and proper school management. This is still used in many schools, particularly those in rural regions, and is known as the conventional way of record keeping. School records are stored using computers and other ICT equipment in many developed and developing countries. This is referred to as modern record keeping.

2.2 School Record Categories

School records are classified as statutory or non-statutory records based on legal requirements. They are also classified as administrative or institutional in terms of record keeping.

2.3 Legal School Records

School records are classified as statutory or non-statutory based on legal requirements. Statutory records are those that every school is required by law to keep (Haruna and Idris2022). The goal is to ensure accountable, effective, and efficient administration. Failure to keep them constitutes an offense that may result in a penalty. Admission information is included in the records. register, log book, curriculum, syllabus, scheme of work, lesson plan, lesson note, journal, time book, continuous assessment records, cashbook, movement book, and so on. These documents are supposed to be kept by principals and produced on demand.

Non-statutory records, on the other hand, are not needed by law and hence are neither mandatory nor specified. Schools can choose which to keep based on school size, ownership, and activities. These contain, among other things, a minute book, a school farm record, a school health record, a duty roaster, an announcement record, and an examination conduct record.

3. School Records Based on Documentation

Administrative records and institutional records are two types of records. Administrative records are documents that provide information about students and their actions at school, to the knowledge of competent authorities. Admission registers, logbooks, staff record books, school inventory records, and so on are examples....

In contrast, instructional records are records that guide teachers and inform the public about what should be

taught to pupils/students in each topic and for each year of schooling. Teachers prepare some of these instructional documents (Janguza, 2007). Timetables, diaries, syllabuses, schemes of work, and lesson plans/notes are examples of instructional records. Administrative records are often kept by the principal or another designated administrator, whereas instructional records are kept by classroom teachers.

3.1 The Advantages of Keeping School Records

The advantages of proper record keeping in education cannot be overstated. Sunday, etal (2020) outline the following are some of the advantages of keeping records.

- School record keeping serves as a repository for school history.
- Provides a mechanism for effective time management and synchronization of schoolwork and activities.
- Assists inspectors/supervisors in evaluating student performance and providing objective advise when necessary.
- It aids in effective teaching and learning, as well as school administration.
- It informs pupils/students on their present academic performance and growth.
- It makes records of graduating students available for admission and placement.
- It disseminates knowledge to the school community, the broader public, employees, and researchers.
- It allows parents to monitor their children's academic achievement and behavior.
- It facilitates and supplements student advice and counseling.
- It gives data for planning and decision-making.
- It enables school principals/head teachers to collect information about students/pupils and staff for decision-making by higher authorities and courts of law when necessary.

4. Device for Storing Data

Privacy records are documents prepared and maintained by service and non-service organizations such as schools, banks, hospitals, police, and others to assist staff in setting goals and understanding the organization's vision for success.

Any computer device used to store, transmit, and save information and devices is referred to as a storage device (Dale and Cory, 2021). It is defined as an Integrated Systems and Technologies for Collecting and Storing Digital Data Using Electro-Optical or Silicon Data Storage (Garry and Dave, 2021). It can process and store both temporary and permanent data.

In a storage device, there are two forms of record keeping: main record keeping and secondary record keeping. Primary record keeping devices are intended to store data on your computer both temporarily and permanently. It is smaller and faster in terms of data access, including RAM and cache. Hard drives, optical drives, and USB flash drives are examples of secondary record keeping devices. Most gadgets are huge and have permanent data store capabilities.

4.1 The Role of Information and Communication Technology (ICT) in School Record Keeping.

Information and communication technology (ICT) is a broad word that encompasses a wide range of technologies that aid in the creation, manipulation, storage, communication, and/or dissemination of information. Computers, being one of the ICTs, play an important role in the development of society. For example, in the field of education, computers are utilized for teaching and learning, as well as for preserving staff and students' records (Haruna, 2014). ICT aids in the preparation of employee payroll and the delivery of information to staff and students via email, SMS, and graphic platforms. According to Ziraba (2009), ICT aids in test management, which includes exam scheduling, time management, students' placement, and grading.

According to Pierre and Andala's (2020) research, ICT is a critical instrument that effects school record keeping, syllabus covering, and content delivery. According to Owo and Nweze (2014), employing ICT in school record keeping aids in the retention of financial data such as pay slips, balance sheets, and wages. In fact, the majority of principals stated that using computers has benefited their record keeping as well as keeping accurate and timely records. Furthermore, the usage of ICT enhances the effectiveness of instructional delivery. As a result, there is a need for a public awareness campaign on the benefits and application of ICT in record keeping for better teaching and learning.

4.2 Computerized Record Keeping

A computer is a piece of electronic equipment that performs three functions: input, conversion, and output. Human behavior can reveal these mechanisms. We make every effort to accurately keep records and use information as needed. These characteristics are what make computer use so crucial in any school, including yours.

A computer is a programmed machine that reacts to specific commands and performs a set of commands (Norton, 2021). In reality, computers are now described as electronic and digital. consisting of hardware (electronic components, transistors, and circuits) and software (instructions and data). The importance of adopting computer technology in schools has also prompted school authorities to use computers in schools to maintain daily job efficiency. Good school records, when kept and maintained properly and effectively, provide information to teachers, counselors, educators, and management in order to plan and implement educational and management activities (Egwunyenga, 2000). In short, the Universal Basic Education Board should provide additional storage facilities to schools through Local Education Authorities so that they can retain their stored knowledge for future generations, and authorities should provide facilities in schools because it is used to create better education and to store computer information (Gama, 2010). Data collection by Principals in Nigerian secondary schools requires the use of computerized decision.

4.3 Keeping records with Cloud Storage

Cloud storage is a tool that allows business owners and customers to securely store data online, allowing it to be accessed at any time, from any location, and readily shared with approved recipients. People can now access several free cloud services, such as Google Drive, Dropbox, and Box, with enhanced packages that offer increased storage and other cloud services. It is a way of storing data online that is managed and operated by a cloud service provider (Krishna, 2019). Documents, presentations, spreadsheets, images, audios, and videos, among other things. To download, edit, and share with others, you must have an internet connection.

Administrators can benefit from cloud storage and data movement as needed. It can also be used to store long-term, infrequently accessed data. By eliminating the need to purchase and manage data storage, cloud storage has satisfied the need for speed and cost (Sammon and Smug, 2021).

Cloud storage can help school administrators improve management in their schools. This innovative school administration system enables school administrators to refresh their skills without feeling rushed. As a result, school managers do not need to keep material in a large room, which consumes more paper and space. All school leaders want is to incorporate technology into the school and work smarter without breaking the money, because technology allows them

to access information when they need it, even if they are not in the classroom (Falana, 2018).

5. Methodology

In this study, a descriptive survey design was used. The study's population consisted of 473 principals from Delta State's 473 public secondary schools (session 2021/2022). The sample size is 150 persons, with 100 men and 50 women. This was accomplished through the use of stratified random sampling. To elicit replies, the Principals Record Keeping Practices for Enhanced Administrative Effectiveness Questionnaire (PRKPEAEQ) was used. This tool is made up of elements that are structured on a 4-point scale. Strongly Agree (SA); Agree (A); Disagree (D);

Strongly Disagree (SD). The weights are 4, 3, 2, and 1 correspondingly. This tool was assessed by two specialists from the University of Delta, Agbor's Departments of Educational Management and Measurement and Evaluation. The Cronbach's alpha value was utilized to determine the scale's dependability, and the values are 0.81 and 0.85. The researchers and three secondary school teachers who served as research assistants distributed and collected the study instrument. To ensure complete and correct copies of the questionnaires entered, direct data gathering methods was used. The mean and standard deviation were utilized to answer the research questions, with a criterion mean of 2.50. The chi-square test was used to analyze the hypotheses at 0.05 level of significance.

Presentation of Results

Research Question 1: How do School Principals' Use of Computers for Record Keeping Practice Aids Administrative success in Delta State Public Secondary Schools?

S/N	Items	Male Principals N=100			Female Principals N=50		
		X	Std	Decision	X	Std	Decision
1.	Record keeping in schools with flash drives helps to provide useful information on the academic progress of students	3.2	0.31	Agree	3.16	0.43	Agree
2.	Record keeping in schools with computer hard drive boasts academic and financial record keeping	3.22	0.24	Agree	3.12	0.43	Agree
3.	Record keeping in schools with memory cards helps in planning and implementation of policies	1.95	0.2	Disagree	1.92	0.26	Disagree
4.	Record keeping in schools with CD Rom help in making information readily available to employers and stakeholders.	3.15	0.3	Agree	3.08	0.42	Agree
5.	Record keeping in schools with computers provide information for assessment of teachers and students.	3.05	0.3	Agree	3.36	0.46	Agree
	Grand mean/std	2.91	0.27		2.92	0.40	

Table 1: Mean scores and standard deviations for male and female School Principals

Table 1 shows the mean scores and standard deviations of male and female principals regarding whether school principals' use of computerized information systems in secondary schools is effective or not. The results showed that the mean values of items 1, 2, 4, and 5 were 3.2, 3.22, 3.15, and 3.5, for male principals and 3.16, 3.12, 3.08 and 3.36 for female principals while item 3 had mean value of 1.95 for male principals and 1.92 for female principals. Overall scores for male and female principals are 2.91 and 2.92 respectively, above the standard average of 2.50. This means that male and female principals agree that the use of computers to store information supports the management of Delta state public secondary schools.

Research Question 2: How does the use of cloud storage record keeping practice by school principals facilitate administrative success in Delta State public secondary schools?

S/N	Items	Male Administrators N =100			Female Administrators N =50		
		X	Std	Decision	X	Std	Decision
6.	Record keeping with cloud storage helps school administrative to organize school finances.	2.93	0.28	Agree	3.28	0.45	Agree
7.	Record keeping with cloud storage helps in decision making in schools	2.74	0.26	Agree	3.12	0.43	Agree
8.	Record keeping with cloud storage helps in having detail knowledge of all schools income and expenditure.	3.07	0.30	Agree	3.12	0.43	Agree
9.	Record keeping with cloud storage aids in planning and identifying areas of school needs.	3.2	0.31	Agree	3.02	0.42	Agree
10.	Record keeping with cloud storage helps school administrators in accountability purposes.	3.41	0.33	Agree	2.90	0.40	Agree
	Grand mean/std	3.07	0.29		3.08	0.42	

Table 2: Mean Scores and Standard Deviations of how Principals use Cloud Storage for record keeping.

The data in Table 2 shows the mean scores and standard deviations for male and female secondary school principals in Delta State on how record keeping with cloud storage will facilitate administrative effectiveness in schools. Both male and female principals agreed on all items with average scores above the standard criterion value of 2.50. This shows that all participants agreed that the management of Delta secondary Schools would be beneficial for school principals to use cloud storage for data storage.

Hypothesis 1: There is no significant difference between male and female principals on how school administrator record keeping practice with computers facilitate administrative effectiveness in Delta State public secondary schools.

School	level of perception				Row total	Calculated value
Principals	Strongly agree	Agreed	Disagree	Strongly disagreed		
Male	40 (40)	45 (44)	10 (11)	05 (05)	100	
Female	20 (20)	21 (22)	06 (05)	03 (03)	50	0.25
Column Total	60	66	16	08	150	

Not significant at 0.05, $df = 3 = 7.82$

Table 3: Evaluation of significant differences on how School Principals’ use of computer-based applications to support the management of secondary schools.

The result for the data in Table 3 above shows a significance level of 0.05 and a chi-square value of 0.25 with 3 degrees of freedom, which is lower than the critical value of 7.82. Because the calculated value of 0.25 is less than the critical value of 7.82, the null hypothesis that there is no significant difference between male and female principals on how school administrators record keeping practice with computers facilitate administrative effectiveness in Delta state secondary schools, is hereby accepted.

Hypothesis 2: There is no significant difference between male and female principals on how school administrator’s record keeping practices with cloud storage facilitate administrative effectiveness in Delta State public secondary schools.

School	level of perception				Row total	Calculated value
Principals	Strongly agree	Agreed	Disagree	Strongly disagreed		
Male	40 (40)	37 (38)	13 (14)	10 (08)	100	
Female	20 (20)	20 (19)	08 (07)	02 (04)	50	1.79
Column Total	60	57	11	12	150	

Table 4: Analysis of the differences between male and female school principals in school principals' use of cloud storage applications to support secondary school management.

The data in Table 4 is related to the second hypothesis. The data shows that the chi-square value at the 0.05 significance level and 3 degrees of freedom is 1.79 and is lower than the 7.82 critical value. Since the calculated value of 1.79 is lower than the critical value of 7.82, the null hypothesis that states that there is a no significant difference between male and female school principals on how school principals' record keeping practice with cloud storage facilitates administrative effectiveness in Delta State public secondary schools is hereby accepted.

6. Discussion of Findings

Research Question 1 found that both male and female school principals agreed that computers should be used for information storage in secondary schools for successful management. Similarly, Hypothesis one confirmed that there was no significant difference in the way male and female school principals used computers to facilitate information management and storage. This conclusion is consistent with Gama's argument that the State Board for Universal Basic Education should provide schools with additional storage to preserve information for future generations and to demonstrate that computers are superior for productivity (Gama, 2010). Such amenities must be provided by the Board. Garry and Dave, also, believed that computerized data warehouses would enable school administrators to work more efficiently by gathering digital data as well as preserving it for future use (Garry and Dave, 2021).

Again, data on research question two suggested that principals' use of cloud storage for record keeping improves administrative effectiveness in public secondary schools. Hypothesis two also demonstrates that there are no significant disparities in the use of cloud computing as a management system by male and female secondary school principals. This outcome is consistent with Sammon and Smug's definition of cloud storage as a cloud computing model in which data is kept on the Internet and managed by cloud computing providers (Sammon and Smug, 2021). It enables school administrators to store data with cloud service providers and conveniently store and access data as needed. Furthermore, Falana, warned that school administrators do not need to store large files in large rooms and use more information, but what administrators need to do is to combine technology and smart work at school to share (Falana, 2018). This technology is cloud storage that allows you to access your data on demand.

7. Conclusion

Accurate record keeping is a useful tool for informed decision-making and effective management in schools and other organizations. School records are considered important not only because of the many important purposes they serve, but also because of the legal requirements for record keeping. School administrations should ensure that school information is not tampered with. Therefore, using computers and cloud storage for records helps improve public secondary school administration.

8. Suggestions

Based on the survey results, the following suggestions were presented:

- The Ministry of Education should create a competency development plan for local learning leaders that includes on-the-job training and new courses. Develop their knowledge and skills in the subject of information storage.
- The state government should offer critical technological and digital resources to all Delta State public secondary schools, such as computers and peripherals.
- To assure document accountability, portability, and global availability, school administrators should support the use of cloud storage for school records.

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