ELECTRONIC RECORDKEEPING AND SCHOOL MANAGEMENT PROCESSES:

A CASE OF SELECTED SECONDARY SCHOOLS IN LUWERO DISTRICT

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DECLARATION

This research dissertation is my original work and has not been presented for any award in any Institution or University.

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Mugisha David   **Date**

APPROVAL

This research dissertation has been submitted for examination with my approval as the Institutional Supervisor.

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DEDICATION

I dedicate this research project to my beloved family members --in particular, my Father and Mother. I thank you for your patience, understanding and continued support financially and morally during the course of my study. You are cherished with much affection.

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LIST OF ABBREVIATIONS

DV   :   Dependent variable

E-Record Keeping   :   Electronic Record Keeping

ICT   :   Information Communication Technology

IV   **:**   Independent variable

ICA   :   International Council on Archives

UBOS   :   Uganda Bureau of statistics

MoES   :Ministry of Education and Sports

ITU   : International Telecommunication Union

DEO   :District Education Officer

DIS   :District Inspector of Schools

UNEB   : Uganda National Examinations Board

ITEK   :   Institute of teacher Education Kyambogo

TDMS   :   Teacher Development and Management Systems

SPSS   :   Statistical Package for Social Science

ABSTRACT

The study sought to establish the relationship between electronic record keeping and school management processes: A case study of selected secondary schools in Luwero District. The objectives which guided the study were:i) To ascertain the level of e-record keeping usage in selected secondary schools in Luwero District; ii) To examine the management process in selected secondary schools in Luwero District; iii) To establish the relationship between e-record keeping and school management process in selected secondary schools in Luwero District.Methodologically, the study adopted a quantitative and qualitative approach with a correlational research design. Out of 1,000 total populations, 278 respondents were sampled of whom: 267teachers and 11 administrators were randomly and purposively selected and answered the questionnaire interviews. Data was analysed using SPSS version 21.From the study findings, there was a relationship between e-record keeping and school management processes. A chi-square test of significance 579.567/216=2.6831, taking the square of $(2.6831)^2 = 7.20$ indicated that there was 72.0% positive significant relationship between e-record keeping and school management processes of p<.05. (P < 0.000, φ=1.473). The count showed that 98% expected counted was less than 5%. The minimum expected count was .01. The degree of impact as indicated by φ=1.473 implies that e-record keeping has a moderate effect on school management processes. The significant level of P<0.000 implies that school management process depends on e-record keeping and these variables are not independent of each other.The study concludes that there is low level of e-record keeping usage in the school management processes. However, if properly adopted, this can improve the admission process, the storing of students' and teachers' bio-data, examination records, attendance, administrative data, and financial record keeping. Also, it will enhance the management in planning, staffing, monitoring and controlling of management processes in schools.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

School management processes are critical to the effective operation of educational institutions. These processes include student enrolment, teacher management, curriculum development, and financial management, among others (Schiro, 2013). However, schools in many developing countries face numerous challenges in implementing and managing these processes effectively. This results in poor educational outcomes, limited access to resources, and ineffective use of available resources. According to Niyonshuti and Gahima (2018), school management in developing countries is often characterized by a lack of resources, poor infrastructure, inadequate training, and limited access to technology. These factors make it difficult for schools to manage their resources effectively and provide quality education to their students.

Electronic record-keeping and school management processes have become increasingly important in education of the modern era. Electronic record-keeping refers to the process of storing and managing educational data in electronic form using computers and other digital devices. This includes student records, attendance, academic performance, and other related data. On the other hand, school management processes refer to the management of various activities and processes that take place in schools, including student enrolment, teacher management, and other administrative tasks.The use of electronic record-keeping in school management processes can greatly improve the efficiency and effectiveness of school operations. According to Chikumbu and Makina (2018), electronic record-keeping can help to reduce the time and effort required to manage student records and other administrative tasks. This can lead to improved productivity and more efficient use of resources in schools.

Similarly, Kukulska-Hulme and Traxler (2013) argue that electronic record-keeping and school management processes can help to improve communication and collaboration between teachers, students, and parents. This can help to create a more supportive learning environment and improve student outcomes.

However, despite these potential benefits, the use of electronic record-keeping and school management processes is not yet widespread in many schools, especially in developing countries. This is partly due to a lack of resources and infrastructure, as well as a lack of awareness about the potential benefits of these technologies.

Therefore, this study explored the current state of management processes and electronic record-keeping in selected secondary schools in Luwero District, Uganda. Specifically, the study was to:Assess the level of adoption and use of electronic record-keeping and school management processes in the selected schools; identify the benefits and challenges associated with the use of these technologies, and provide recommendations for improving the adoption and effective use of electronic record-keeping and school management processes in secondary schools in Luwero District. This chapter further presents the background to the study, problem statement, general and specific objectives, research question and hypothesis, scope of the study, significance of the study, definition of key terms and justification of the study.

1.1 Background to the study

The background to the study is presentedunder historical background, theoretical background, conceptual and contextual background.

1.1.1 Historical background

Electronic record keeping is the act of storing information recorded by a computer that is produced or received in the initiation, conduct or completion of an agency or individual activity

(Franks, 2013). Examples of electronic records include e-mail messages, word- processed documents, electronic spreadsheets, electronic database, and digital images. E-record keeping and information science as a field of management study is relatively new. In spite of this, the practice of record management itself has long been carried out.

For example, according to Atika (1987), the Greeks pioneered it in the year 350 BC followed by ancient Romans later by the Roman Catholic Church and then scholars of the Renaissance practiced it. Many scholars like Tsikata (1988), Johnson and Kallus (1982) agree that methods of e-record preservation had existed in one form or another since the beginning of written history. Unfortunately, however, there had been no consistent application of electronic methods to the subject of records management with a view of advancing this area of work.

Batty (1972) argues that even in post-war period, the office still remained unattractive to the right calibre of staff particularly men. Thus the introduction of science and technology in offices remained the only way of attracting competent personnel for the work; which is why we found out that e-records management as a field of study is relatively new. In secondary schools, however, e-records management is still new. In fact there has been record keeping since these schools were established. However, what is significant is the method of records management that can facilitate efficient and effective handling of secondary school administration.

It is generally acknowledged that record keeping has since been delegated to secretaries without due emphasis from top management. The concern of top managers only arises when records that cannot be found or when such records, for example, are not delivered in time. Cronin (1985) supports this view when he says that people do not know what they want until a particular set of circumstances arises and they want very specific information instantly. Johnson and Kallaus (1982) confirm that record keeping existed in ancient periods.

Various methods of records keeping included keeping records on stones or earthenware, pots, engraving, evidence on wax, stone, parchment or urns. Other developments in record keeping, they continue to argue, included the spindle file, developed around the 15th century(Johnson and Kallaus, 1982). It is believed that the slow development in record keeping was as a result of the fact that work control techniques such as time and motion studies, work sampling and cost accounting procedures which were used by scientific managers took long to be applied to office management (Taylor, 1849). According to Johnson and Kallaus (1982), scientific application of work control techniques in record management is a relatively recent development and a feature of the post-war period.

From the above discussion, in secondary schools, many people do believe that prior to 1970 record keeping was more efficiently done than it is today. Thus administration of secondary schools becomes difficult and sometimes impossible. Therefore additional knowledge through scientific management of records made this study more necessary.

1.1.2 Theoretical Background

The underpinning theory that guided the study was based on the Innovation Adoption Theory developed by Carl Rogers in 2003. This Innovation Adoption Theory of Rogers states that the earlier one accepts Information Communication Technology (ICT), the more that individual is likely to benefit from advantages from these ICTs than those who adopt these ICTs late. Also, it states that as one learns to use these ICTs early, the better that individual would be positioned to benefit from their advantages.

In line with Innovation Adoption theory the study suggests and assumes that those secondary school administrators who will adopt ICTs and its usage in record keeping in Luwero District would be likely to enhance data management in e-recruitment processes, file storage and retrieving in time and large quantity, data protection, and insupervision to effectively and

efficiently manage their process. The relevance of this theory also reflects on the need for effective management which is the dependent variable of this study. The researcher affirms that it would be a great step if e-record keeping was adopted for effective school management processes. For this to be effective, school management processes would be recorded inform of carrying out better planning, organizing, staffing, directing and reporting through transition to E-record keeping training and practices in the school.

Despite the above tenet of innovation adoption theory, there are still some limitations that need to be put into consideration for proper adoption and implementation of ICT innovations in schools. Passarelli, Bongiorno, Cucino and Cariola (2023) construed that the first stage of innovation adoption involves training. However, format and the complexity of the innovation are important considerations. Noteworthy, highly complicated innovations require greater investments, more intensive instruction, and a greater quantity of role playing, practice rehearsal, monitoring, "booster" sessions, and ongoing technical assistance to ensure successful implementation. Decisions by staff on whether to attend training or not are influenced by relevance to their needs, accessibility of location, scheduling, and cost, and credentialing educational or certification benefits. The value of training is intertwined with the quality of innovation materials and training experience, which further affect the adoption and implementation (Photopoulos & Triantis, 2023).

Liu, Lu, &Niu (2023) accentuated that internal organizational and external funding pressures and needs for applying innovations can also influence attendance at workshops and training sessions. Notwithstanding the above limitations, the application of Innovation adoption theory was crucial to this study if those limitations could be handled during the school management planning and implementation process so as to adopt e-record keeping for effective and efficient

data management in the school. Hence, the earlier the better. Failure to apply Rogers Theory would mean that the reverse is true.

1.1.3. Conceptual background

The major concepts that guided in the study include: Electronic record keeping and school management processes in selected secondary schools in Luwero District. These concepts provides the necessary information required to aid our comprehension of the subject matter. However, the conceptual background created the avenue of understanding the underlying concepts provided in this text.

E-record keeping is the independent variable (I.V) of this study. The term record comes from the Latin word 'recordari' which means recalling or to remember or bring back to mind and this is exactly what records do (Pember and Cowan, 2010). Records are generally the accounts of facts, events and issues created and stored in any physical form as an authentic evidence for reference. The International Council on Archives (ICA, 2012) defined a record as recorded information produced or received in the initiation, conduct or completion of an institutional or individual activity and that comprises content, context and structure sufficient to provide evidence of activity.

An electronic record keeping is the act of storing information recorded by a computer that is produced or retrieved in the initiation, conduct or completion of an agency or individual activity (Franks, 2013). Examples of electronic records include e-mail messages, word- processed documents, electronic spreadsheets, electronic database, and digital images. It can also either be a tangible object or digital information for example birth certificate, office documents, data bases, application data, and email.

Pen et al (2009), emphasized that for records to serve any useful purpose, they need to be properly kept, in other words, they must be accessible, accurate, relevant, easy and possible to

manipulate in the form required. Otherwise, improperly kept records are not worth more than the original data. Poorly kept records are merely conglomerations of unrelated details in so doing not serving any useful purpose.

In a society the definition of a good school usually includes the concepts of an effective, good-quality and best-scoring school (Jolanta & Sandra, 2013). When talking about the concept of an effective school, the aspects of education and management should be emphasized as school focuses mainly on educational activity which, from the viewpoint of management, is often seen as the provision of educational services (Jolanta & Sandra, 2013). It is also important to take into consideration the fact that a school is an organization which acts in a changing and complicated social environment, which has in its disposition very limited resources and involves many different interested parties, such as institutions of educational management, school administration, teachers, students, parents, tax payers, society (Jolanta & Sandra, 2013). According to Igah (2022) management is a distinct ongoing process of allocating inputs of an organization (human and economic resources) by typical managerial functions (planning, organizing, directing and controlling) for the purpose of achieving stated objectives.

Management process is a series of fundamental steps to manage any activity, business or project in order to produce optimum results as per the defined strategy and vision. Management process includes steps to plan, organize, staff, lead and control the resources to completely manage any particular task, project or business on an ongoing basis (MBA SkoolTeam, 2022). These processes need to be carried out by managers or business leaders to ensure they are able to meet the business requirements with maximum efficiency. In this context, school management processes according to the current study would refer to the steps involved in planning, organizing, staffing and controlling the school resources to completely manage e-record keeping and other administrative functions that require the use of ICT for data

management for easy storage, accessibility, protection of data for future retrieval and accuracy in the school management and documentation processes.

1.1.4 Contextual Background

The study was carried out in Luwero District.In Luwero District, the use of electronic record-keeping systems and school management processes is still relatively low. Most schools still rely on paper-based record-keeping systems, which can be time-consuming and prone to errors (Kuteesa, 2019). In Luwero District, specifically, the limited use of electronic record-keeping in secondary schools is a cause for concern.

The District Education Officer's survey in 2019 found that only 36% of secondary schools in Luwero District have access to computers (District Education Officer, 2019). This lack of access to technology hinders the implementation of electronic record-keeping systems in these schools. This has led to challenges in data management and analysis, which in turn has an impact on decision-making processes and overall school performance (Kyeyune, 2018).

In recent years, there has been a growing need for schools to manage large amounts of data and information efficiently and accurately. Electronic record-keeping systems have become increasingly important in school management processes as they help schools to store, manage, and retrieve data and information easily and quickly (Safari, 2019).

The purpose of this study was to examine the use of electronic record-keeping systems in selected secondary schools in Luwero District and their impact on school management processes. The study also identified the challenges associated with the implementation of electronic record-keeping systems and provided recommendations for their effective use in school management processes.

1.2 Problem Statement

Secondary schools in Uganda face numerous challenges in managing their operations effectively. These challenges can lead to poor academic performance, limited access to resources, and low enrolment rates. According to the Ministry of Education and Sports in Uganda, the national enrolment rate for secondary education in Uganda is 25%, which is significantly lower than the enrolment rates in other African countries such as Kenya (45%) and Tanzania (36%) (Ministry of Education and Sports, 2019). This highlights the need for effective school management processes to improve access to education in Uganda.

Electronic record-keeping has become increasingly important in modern school management processes. It allows for the efficient collection, storage, and retrieval of data, which can help schools make informed decisions and improve their operations (Chikumbu and Makina, 2018). However, many schools in developing countries, including those in Luwero District, Uganda, still rely on manual record-keeping methods. This can result in inefficient data management, limited access to information, and poor decision-making. According to Kiregyera (2019), only 20% of secondary schools in Uganda have computer laboratories, and only 10% have internet access. This lack of technology infrastructure makes it difficult for schools to adopt electronic record-keeping systems and can lead to inefficient data management.

Secondary schools face challenges such as limited financial resources, inadequate infrastructure, and a lack of trained personnel to manage school operations. According to a survey conducted by the District Education Officer in 2019, only 43% of secondary schools in Luwero District have access to electricity, and only 36% have access to computers (District Education Officer, 2019). This lack of resources makes it difficult for schools to manage their operations effectively and provide quality education to their students. Furthermore, the academic performance of students in Luwero District is also a cause of concern. According to the Uganda National Examinations Board (UNEB), only 30% of students who sat for the

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Uganda Certificate of Education (UCE) examinations in 2020 passed with grades 1-4 (UNEB, 2020). This is lower than the national pass rate of 38.8% and highlights the need for effective school management processes to improve academic outcomes.

Therefore, this study explored the relationship between electronic record keeping and school management processes using a case study of selected secondary schools in Luwero District.

1.3 General objective

The aim of this study was to establish the relationship between electronic record keeping and school management processes.

1.4 Specific Objectives

The study was guided by these specific objectives.

I.   To investigate the level of e-record keeping usage in selected secondary schools in Luwero District;

II.   To examine the management processes in selected secondary schools

III. To establish the relationship between e-record keeping and school management processes in selected secondary schools in Luwero District.

1.5. Research Hypotheses

H_0: There is no significant relationship between e-records keeping and school management processes in selected secondary schools in Luwero District

H_1: There is a significant relationship between e-records keeping and school management processes in selected secondary schools in Luwero District

1.6 Scope of the study

The study took into consideration the following scopes: geographical scope, content scope and time scope.

1.6.1 Geographical Scope

The study was conducted in the five selected secondary schools in Luwero District. These secondary schools included Katikamu SDA Secondary School, Luwero Secondary School, St. Andrews Secondary School, Kasaala, Semu M. Muwanguzi Seed School and Bombo Army Secondary School. Luwero District lies in the central part of Uganda; it borders Kayunga District in the East, Mukono and Wakiso Districts respectively in the south, Nakasongola in the North and Nakaseke in the West. The co-ordinates of this district on the map of Uganda are 00 50 N 32 30 E and 00 50 N and 32 30 E.

1.6.2 Content Scope

The study covered ICT usage with specific reference to e-record keeping in school management process of secondary schools. E-record keeping entails keeping records related to admission of learners, students' bio data, teachers' bio data, examinations records and attendance records managed electronically.

1.6.3 Time Scope

The study covered the period between 2015 and 2022 following the recent developments and the emergence of e-record keeping in the management of secondary schools.

1.7 Significance of the study

The study was very significant to be conducted due to limited use of electronic record-keeping in secondary schools in Luwero District. Literature as documented by the District Education Officer's survey in 2019 found that only 36% of secondary schools in Luwero District have access to computers (District Education Officer, 2019). For this reason the study findings would be significant to the following categories of stakeholders:

To the Policy makers in Ministry of Education and the District Education Board as this may inform them of how e-record keeping affect the school management process and thus be helpful to draw strategies to improve on the ICT development in Luwero District and other parts of the country.

The study findings may be essential to the Board of Governors in the selected secondary schools where this study will be conducted as these would inform them of how e-record keeping influence schools' management process. This would help to ensure that e-record keeping usage is improved on.

The study findings might as well benefit the students in the selected secondary schools in a way that through improving on the use of ICTs in school management process the students records will be properly kept and managed with accuracy. Consequently, student's results and bio data will be up-to-date.

The findings of the study may also help to identify how ICTs usage in e-record keeping relate to school management processes in the various selected schools. In so doing possible recommendations would be drawn on how to improve on the usage.

The study findings might be essential to future researchers as they would use this study as a source of reference in their suggested studies. Hence a sure base for literature review and covering the gaps that might have not been covered in this study.

1.8 Justification

This current study was justified on account that effective management of secondary schools is critically essential in the realization of educational goals, objectives and national development agendas. However, no empirical study had been carried out to establish the relationship between e-record keeping and school management process in selected secondary schools in

Luwero District, more so utilizing the innovation adoption theory and Chocolate model which this current study incorporated.

1.9 Conceptual framework

E-record keeping   (IV)   **School Management Processes (DV)**

Innovation Information Communication Technologies
1. User friendliness
2. Relative advantage
3. Perceived usefulness
4. Accessibility
5. Social factors

1. Planning
2. Organizing
3. Staffing
4. Coordinating
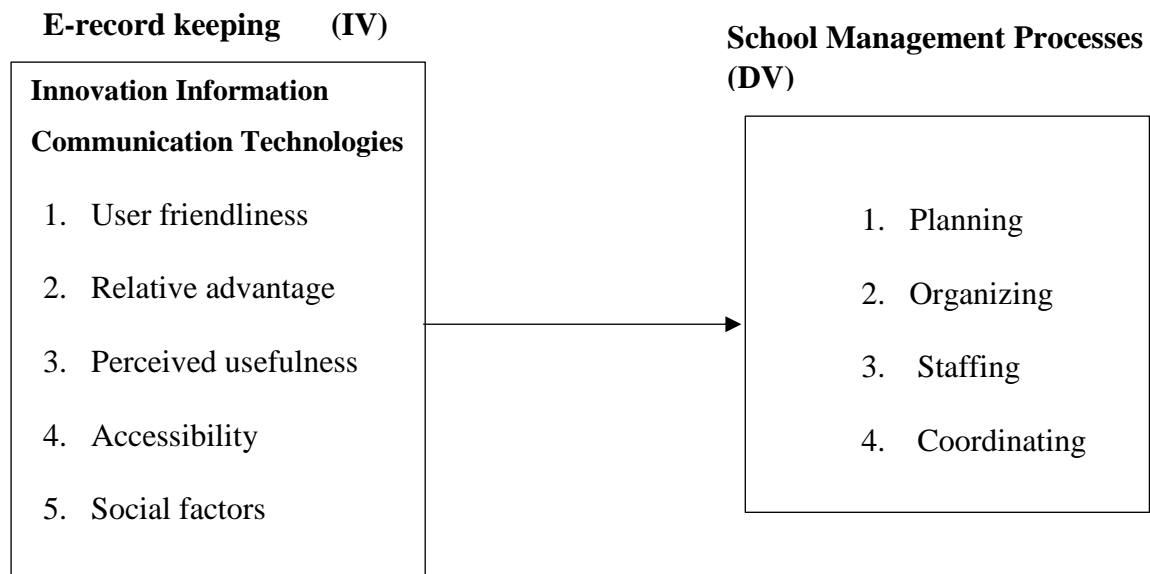
Source: adopted from Mukred and Yusof (2014) and modified by the researcher

Figure 1.1: A conceptual framework showing the relationship between e-record keeping and school management processes in secondary schools.

This model have been modified by including the school managements process such as planning, organising, staffing and coordinating which are the major construct of the dependent variable. The conceptual framework for this study is based on the following key concepts: electronic record-keeping, school management processes, and secondary schools in Luwero District.

Electronic records have been used in Innovation Information Communication Technologies because of its User friendliness, Relative advantage, Perceived usefulness, Accessibility and Social factors

School Management Processes: School management processes refer to the various activities and functions that are involved in running a school effectively. These processes include

Planning, organizing, Staffing and Coordinating Effective school management processes are essential for ensuring that schools operate efficiently and that students receive a high-quality education.

The conceptual framework for this study explored the relationship between electronic record-keeping and school management processes in selected secondary schools in Luwero District. Specifically, the study examined how electronic record-keeping systems can be used to improve school management processes, such as student information management and academic planning and monitoring. The study also explored the challenges and opportunities associated with implementing electronic record-keeping systems in secondary schools in Luwero District.

According to the Innovation Adoption Theory, the process of adopting and implementing a new innovation, such as electronic record-keeping systems, typically involves several stages. These stages include awareness, interest, evaluation, trial, and adoption. Each stage of the process is influenced by various factors, including the characteristics of the innovation, the characteristics of the adopters, and the social context in which the adoption takes place. In the case of electronic record-keeping and school management processes in selected secondary schools in Luwero District, the Innovation Adoption Theory can help to explain the factors that influence the adoption and implementation of electronic record-keeping systems. For example, school administrators and teachers may need to be made aware of the benefits of electronic record-keeping systems and how they can improve school management processes. They may also need to be interested in the innovation and willing to evaluate it before they can consider adopting it.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a comprehensive examination of the literature that was utilized to achieve the study's objectives. The review covers the theoretical and conceptual framework, as well as relevant literature, to gain a thorough understanding of the critical aspects involved in the research. This in-depth analysis ensures a stronger and more effective interpretation of the study's finding.

2.1 Theoretical framework

The theoretical review of this study was etched on the Chocolate Model of Diane Dormant (2011). The Chocolate Model focuses on innovation adoption and change related to an organization. It is structured around four elements: change, adopters, the change agent(s), and the organization (CACAO) when made into an acronym for ease of recollection and use for planning. This was very crucial to this study as it resonated with the management processes which this study is set to examine.

Unlike Rogers' Innovation adoption Theory, the Chocolate Model can be applied when planning for organizational change and innovation adoption. The process flows as follows: first, analyse the change to see whether it is a new system or innovation (Dormant, 2011). This is similar to the first step of seeking knowledge that is in Rogers' (2003) adoption process. The second step is to analyse the adopters of the change. Third, identify the change agents. At this point, a plan is developed.

The next step is to examine the organization where the change process is expected to occur as well as analysing the larger context of the organizational change and how it impacts other

aspects of the whole organization. Before implementing, the plan may be revised based on the outcomes of the organizational analysis (Dormant, 2011). The researcher therefore based on this background to accentuate that the process of adopting new innovation into the school system must look into the planning and implantation process and the change agents who are going to handle the aspect of e-record keeping in the school for effective and efficient practices and performance.

However, the researcher noticed a gap in this theory. Chocolate Model did not account for the impacts it would make in the school after implementation. But the researcher adopted this model to look out for the adaptability of the innovation of e-record keeping in the selected secondary schools in Luwero District and how it could enhance the school management system in place in their planning, organizing, staffing and controlling the activities of the schools.

2.2 Related Literature

Literature related with the three study objectives was identifiedas it expounded on the various levels of e-record keeping usage, school management process and the relationship between e-record keeping and on secondary school management processes.

2.3 Level of e-record keeping Usage in schools

Many daily transactions are done in school and in order to support efficient and effective functioning, many records have to be kept either electronically or via paper-based files. The records management practices in these Secondary Schools must be seen to support their continuity, timely decision-making, good planning, control and budgeting processes, among others. Saffady (2014) sees electronic records as informational or data files that are created and stored in digitized form through the use of computers and application software. They are stored on various magnetic and optical storage devices and are products of computer software. The format of an electronic document does not change the fact that it is a record, but its electronic

form and its dependence on machines for creation and reference do change the way these records must be stored and managed.

Mukwe, Meremu, Rule and Role (2013) studied ICT in secondary school administration in rural southern Kenya with use of T-test analysis method. Results revealed that it is a very important aspect in school administration. It is not only important in supervising teachers' instruction but also used in the various planning processes of the school. This was provided in a narrow sense and did not have components of e-record keeping and ICT usage in recruitment, appraisal and training of employees in the school. Meanwhile, Oycer et al. (2015),undertook a study about the effects of ICT Integration in management of private secondary schools in Nairobi country, Kenya. Using descriptive statistics, percentages were reported at various rates on different aspects of management. The financial Management level of e-record keeping was reported at 62.5%, with schools having automated accounts, followed by 71.9% electronic pay roll, 53.1% on helping to improve budgeting. Similarly, automated stores in management were rated 68.75% and staff electronic records in management were rated 62.5%. All these were possible due to the availability of e-record usage reported in schools. However, this reviewed study used only descriptive results while the current study in addition was correlational and bivariate in generating its results.

The call for all the schools to implement an e-records management programme that ensures reliable and adequate vital records in place is highly advocated for by Agheuta (2021). He points out that all the school staff should have access to records relevant to their operations, except confidential records, if the schools are to function well. He advises that the head teachers should make sure that all vital school records are kept and maintained safely to allow current and future school functioning. In support of the foregoing, Iyede (2017) advises that every organization/school must have structures and systems in place that support the proper management of records in compliance with the standards in place. Such a system, he suggests,

should maintain a file index and appropriate file reference and track up systems to ease timely location and retrieval of documents. Batty (2019) also supports the foregoing e-records management arrangements for all cataloguesto be prepared and displayed in a convenient place for quick reference of all public records.

Halliday (2019), observes that record keeping systems in organizations take the following forms: Paper, Micrographic and Electronic formats. He says that whereas the electronic record keeping system is a system in which records are captured, stored and disseminated electronically through ICT gadgets like computers, scanners, among others, the paper-based records are very manual in operation and quite bulky to keep and be maintained. However, the form in schools was the gap filled by this study.

2.3.1 User-friendliness

Catherine McGoldrick, in a Journal of Electronic Records article titled, "User-Centered Design and Evaluation of E-Record Keeping Systems", discusses the importance of user-centred design in creating effective and user-friendly electronic record keeping systems. A Survey of Electronic Records Management in Nigerian Universities" by Adebayo AdeyemiAdekunle and BukkyOyebisi examines the use of electronic records management in Nigerian universities and assesses the user-friendliness of the systems in place.

"Usability and User Acceptance of Electronic Medical Records" by Randa S. Shehab and Moussa S. Shteiwi investigates the usability and user acceptance of electronic medical records among healthcare professionals

"User-friendly electronic record-keeping systems: A study by the International Records Management Trust" found that user-friendliness was critical to the successful implementation and use of electronic record-keeping systems. The study recommends that systems should be designed with the user in mind, making them easy to navigate and use.

"Innovative ICTs for record-keeping",a paper published in the International Journal of Advanced Research in Computer Science and Software Engineering highlights the importance of innovation in ICTs for record-keeping. The paper notes that innovations such as cloud computing and blockchain technology have the potential to revolutionize electronic record-keeping systems.

"User-centered design for e-record keeping", a study by the National Archives and Records Administration in the United States emphasizes the importance of user-centred design in e-record keeping. The study recommends involving end-users in the design process to ensure that the system is user-friendly and meets their needs.

Accessibility in e-record keeping: The World Wide Web Consortium (W3C) has developed guidelines for making electronic content, including e-record keeping systems accessible to people with disabilities. These guidelines emphasize the importance of user-friendliness and accessibility in ICTs for electronic record-keeping.

2.3.2 Relative advantage

Relative advantage refers to the degree to which an innovation is perceived as being better than the existing technology or practice. In the context of electronic record-keeping, innovation information communication technologies (ICTs) provide a number of relative advantages over traditional paper-based systems.

Increased Efficiency and Productivity: ICTs allow for faster and more accurate record-keeping processes, reducing the time and effort required to manage large amounts of data. This results in increased efficiency and productivity in the workplace (Kendall, 2011).

Improved Data Accuracy and Security: Electronic record-keeping reduces the risk of errors, loss, or damage to physical records. Data can also be backed up and stored securely, providing protection against unauthorized access and cyber threats (Abdelhak, Grostick, &Hanken, 2012)

Enhanced Accessibility and Availability: Electronic records can be accessed and shared remotely by authorized personnel, allowing for greater flexibility and accessibility compared to physical records that may only be available in a specific location (Tang & Li, 2010).

Cost Savings: ICTs can reduce costs associated with paper-based record-keeping, such as printing, storage, and transport (Chowdhury&Chowdhury, 2007).

Improved Data Analysis: Electronic record-keeping facilitates data mining and analysis, enables organizations to derive valuable insights and make data-driven decisions (Haux et al., 2017).

Several studies have demonstrated the relative advantage of electronic record-keeping systems. For example, a study by Ammenwerth et al. (2008) found that electronic health record systems were associated with improved patient care and reduced medical errors compared to paper-based systems. Another study by Pizziferri et al. (2005) found that electronic medical record

systems were associated with higher rates of guideline adherence and improved clinical outcomes.

In addition, electronic record-keeping systems have been shown to have financial benefits, including reduced costs and increased revenue. A study by Hillestad et al. (2005) found that electronic health record systems were associated with lower administrative costs and improved billing and coding accuracy, leading to increased revenue for healthcare organizations.

2.3.3 Perceived usefulness

Davis (1989) proposed that the perceived usefulness of a technology is a key determinant of user acceptance. Alkraiji, Jackson, and Alalwan (2019) found that perceived usefulness was one of the main factors affecting the adoption of electronic medical records in Saudi Arabia. Wamba et al. (2015) emphasized the potential impact of "big data" on various industries and how it can create value for organizations. Kohnke and Hammerschmidt (2015) highlighted the role of perceived value in e-commerce, while Lapão and da Silva (2017) focused on the adoption of electronic health records in the United States and the importance of understanding the multi-level framework of this process.

Oliver Kohnke and Markus Hammerschmidt: Kohnke and Hammerschmidt are researchers in the field of e-commerce. Their paper, "The impact of customer perceived value on trust in e-commerce," was published in the *Journal of Electronic Commerce Research* in 2015. They studied the impact of perceived value on consumer trust in e-commerce transactions and found that it was positively correlated with perceived usefulness.

Abdullah Alkraiji, Thomas Jackson, and AbdulazizAlalwan: Alkraiji, Jackson, and Alalwan are researchers in the field of information systems. Their paper, "Investigating the factors that affect the adoption of electronic medical records in Saudi Arabia," was published in the *Journal of Enterprise Information Management* in 2019. They studied the factors that influence the

adoption of EMRs in Saudi Arabia and found that perceived usefulness was a key driver of adoption.

Luis Lapão and MárioMacedo da Silva: Lapão and da Silva are researchers in the field of health information systems. Their paper, "Understanding electronic health record adoption in the United States of America: a multi-level framework," was published in the *International Journal of Health Policy and Management* in 2017. They analysed the factors that influence the adoption of EHRs in the US, including perceived usefulness.

2.3.4 Accessibility

Improved accessibility for individuals with disabilities: E-record keeping systems can be designed with accessibility in mind, making it easier for individuals with disabilities to access and use the system. For example, screen readers can be used to read text aloud for individuals with visual impairments (Kim, 2015).

Easy access to information from any location: E-record keeping systems can be accessed from any location with an internet connection, making it easier for individuals to access information regardless of their physical location. This can be particularly beneficial for individuals who work remotely or who are travelling (Neri, 2017).

Multilingual support: E-record keeping systems can be designed to support multiple languages, making it easier for individuals who speak languages other than the primary language of the organization to access and use the system. This can be particularly important in multicultural organizations or organizations that operate in multiple countries (Sharma &Jha, 2016).

Improved accessibility for remote and rural locations: E-record keeping systems can be accessed from remote and rural locations, making it easier for individuals who may not have access to physical records or who are located far away from the organization's headquarters to access information (Johnson & Haynes, 2016).

Mobile compatibility: E-record keeping systems can be made compatible with mobile devices, allowing users to access records on the go. This is especially important for field workers who need access to records while they are out of the office (Lambe, 2013).

Improved searchability and retrieval: E-record keeping systems offer powerful search capabilities that make it easy for users to locate specific records quickly. This is especially important in large organizations with vast amounts of data to manage (Larsson &Svensson, 2016).

Remote access: E-record keeping systems allow authorized users to access records from any location with an internet connection. This is particularly beneficial for organizations with remote employees, as it allows them to access records from anywhere (Dharmavaram &Benyoucef, 2017).

User-friendly interfaces: User-friendly interfaces make it easier for users to interact with e-record keeping systems, reducing the risk of errors and increasing user adoption rates (Holt & Newell, 2014).

Integration with other systems: E-record keeping systems can be integrated with other systems, such as email and document management systems, making it easier for users to manage their information from a single interface (Waters, 2017).

2.3.5 Social factors

Growing concern for data security and privacy: With the increasing number of data breaches and cyber-attacks, data security and privacy have become critical concerns for organizations.

The adoption of e-record keeping systems has been driven by the need to ensure that sensitive data is secure and protected from unauthorized access (Dhillon&Torkzadeh, 2006).

Pressure to comply with regulatory requirements: Governments and regulatory bodies have mandated the use of e-record keeping systems in various industries to ensure compliance with legal and regulatory requirements. Organizations have been compelled to adopt e-record keeping systems to avoid penalties and legal consequences (Bamgboye&Adebiyi, 2016).

Growing awareness and acceptance of cloud-based technologies: The popularity of cloud-based technologies has grown in recent years due to their flexibility, scalability, and cost-effectiveness. Organizations have adopted cloud-based e-record keeping systems to take advantage of these benefits (Chen & Zhang, 2014).

Increased collaboration and sharing of information: The use of e-record keeping systems has facilitated collaboration and sharing of information among different departments, stakeholders and organizations. This has improved communication and decision-making processes, leading to better organizational performance (Oliveira & Martins, 2010).

Changing work culture and employee expectations: The adoption of e-record keeping systems has been influenced by changing work cultures and employee expectations. Employees expect to have access to information and resources from anywhere, at any time. E-record keeping systems provide this flexibility and accessibility (Ardito&Scuotto, 2019).

2.4 Management Processes in Schools

Mullins (2016) defines management as "the process of planning, organizing, leading, and controlling an organization's resources in order to achieve its goals. Mullins also highlights that

management involves managing an organization's resources, which can include financial resources, physical resources, and human resources. The goal of management is to effectively and efficiently use these resources to achieve the organization's goals. According to Peter Drucker, one of the most influential management theorists, "Management is the art of getting things done through people" (Drucker, 1954). The research viewed a school in itself as an institution where work was done effectively and efficiently. This means responsibilities have to be defined and relationships have to be developed.

The *Harvard Business Review* also defines management as "the processes of planning, organizing, directing, and controlling resources (people, materials, capital, and information) to achieve organizational goals" (HBR, n.d). Furthermore, the Chartered Management Institute looked at management as "the process of planning, organizing, leading and controlling resources (including people) to achieve organizational goals" (CMI, n.d.)

School management processes, therefore, refer to the activities involved in organizing, planning, implementing, monitoring, and evaluating the operations of a school or educational institution. These processes are essential for ensuring that the school operates efficiently and effectively, and that the needs of all stakeholders, including students, teachers, staff, and parents are met.

Therefore, for proper adaptability of e-record keeping, the school management should put in place various management processes like planning, organizing, staffing and controlling these activities for smooth running and accountability and accuracy in its implementation, monitoring and reporting procedures.

In support of the foregoing observations, Wallace,*et al.* (2020) adds that:

Information is a vital business tool as well as a business resource. That a business office would greatly be disorganized as well as vulnerable if it had to rely on the mortal memories of the officer's concerned to recall every transaction.

This is because workers change jobs, organizations, they forget, die and can easily be corrupted. He advises that as such organizational records ought to be well managed following standards and procedures in place. The researcher echoed the same should be applicable in Luwero District by context not by generalization.

Henri Fayol (1916), one of the founders of modern management theory, asserts that management comprises five functions: planning, organizing, commanding, coordinating, and controlling, these processes of management are henceforth expounded as follows.

2.4.1 Planning

Baker, et al. (2010) highlights the problems associated with using student test scores as a basis for evaluating teachers. The authors argue that such evaluations fail to take into account other factors that can affect student learning, such as poverty, language barriers, and school resources. The report recommends that evaluations should consider multiple measures of teacher effectiveness and be used as part of a broader system of school improvement.

Fullan (2001),emphasizes the importance of leadership in creating a culture of change within schools. He argues that effective school leaders must develop a shared vision for the school, engage stakeholders in the planning process, and create a sense of urgency around achieving the school's goals. Fullan also emphasizes the importance of ongoing evaluation and feedback to ensure that the school is making progress towards its objectives.

Leithwood and Riehl (2005)provide a comprehensive overview of the research on effective school leadership. The authors argue that effective leaders must be able to create a shared vision, develop a supportive culture, and engage in ongoing professional development. They

also emphasize the importance of developing strong relationships with stakeholders and using data to inform decision-making.

Robinson, Lloyd, and Rowe (2008) explore the impact of different types of school leadership on student outcomes. The authors argue that transformational leadership, which emphasizes a shared vision and high expectations, has the greatest impact on student learning outcomes. They also emphasize the importance of distributed leadership, which involves sharing leadership responsibilities with other members of the school community.

Spillane (2012) explores the concept of distributed leadership, which involves sharing leadership responsibilities across multiple members of the school community. He argues that distributed leadership can lead to improved teacher performance and student learning outcomes. Spillane also emphasizes the importance of building strong relationships between school leaders and teachers to ensure that distributed leadership is effective..

Planning is essential for school improvement efforts. According to the research conducted by Leithwood and Louis (2011), successful schools have a strong focus on planning and data-based decision-making. These schools prioritize long-term planning and use data to inform their decision-making processes. By doing so, they are able to identify areas in need of improvement and develop strategies to address them.

Planning is also a critical component of curriculum development. According to the research conducted by Cheng and Yuen (2007), effective curriculum planning involves identifying learning goals, selecting appropriate instructional strategies, and designing assessments that align with those goals. By doing so, educators can ensure that the curriculum is relevant, engaging, and effective.

Strategic planning is an important aspect of school management processes. According to the research conducted by McLeskey and Waldron (2011), strategic planning involves developing

a vision for the school, setting clear goals, and identifying the resources needed to achieve those goals. By doing so, schools can create a roadmap for success and ensure that their efforts are aligned with their overarching mission and objectives.

There is also evidence to suggest that planning has a positive impact on student achievement. According to the research conducted by Nye, Konstantopoulos, and Hedges (2004), schools that prioritize planning and goal-setting tend to have higher levels of student achievement. This is likely due to the fact that planning helps schools to identify areas in need of improvement and develop strategies to address them.

Strategic planning is a long-term planning process that involves setting goals, determining the resources required, and developing strategies to achieve them. This process enables schools to identify their strengths and weaknesses, establish priorities, and make informed decisions about resource allocation. According to Christensen, Marx, and Stevenson (2006), strategic planning is essential for school improvement and can help schools to achieve their mission and vision.

Curriculum planning involves the development and implementation of a curriculum that meets the needs of students and aligns with the school's mission and goals. Effective curriculum planning considers the needs of all students, including those with diverse backgrounds and learning styles. According to Hattie (2012), curriculum planning is essential for improving student outcomes and should be informed by evidence-based practices.

Resource planning involves the allocation of resources, such as finances, personnel, and materials, to support the school's goals and objectives. Effective resource planning involves identifying the resources required, estimating the costs, and determining the most efficient and effective ways to allocate resources. According to Vernez and Krop (2011), resource planning is essential for schools to operate efficiently and effectively.

School improvement planning is a process that involves identifying areas for improvement, setting goals, developing strategies, and monitoring progress. This process enables schools to continuously improve their programmes and services and respond to changing needs and priorities. According to Leithwood, Seashore Louis, Anderson, and Wahlstrom (2004), school improvement planning is essential for improving student outcomes and achieving organizational effectiveness.

2.4.2 Organizing

Organizational structure refers to the way in which a school is organized to achieve its goals and objectives. Effective organizational structures ensure that resources are allocated efficiently, roles and responsibilities are clearly defined, and communication is facilitated. According to Mintzberg (1980), organizational structures can take different forms, such as functional, divisional, or matrix, depending on the school's size, complexity, and objectives.

Human resource management involves the recruitment, selection, training, and development of staff to support the school's goals and objectives. Effective human resource management ensures that staff is motivated, engaged, and have the necessary skills and competences to perform their roles effectively. According to Armstrong and Taylor (2014), human resource management is essential for organizational effectiveness and can contribute to improved student outcomes.

Time management involves the efficient use of time to achieve the school's goals and objectives. Effective time management ensures that tasks are prioritized, deadlines are met, and resources are allocated efficiently. According to Allen (2014), time management is essential for school leaders to manage their workload effectively, make informed decisions, and lead change.

Information management involves the collection, analysis, and use of data to support decision-making and improve organizational effectiveness. Effective information management ensures that data is collected accurately, analysed appropriately, and used to inform decision-making. According to Garet, Porter, Desimone, Birman, and Yoon (2001), information management is essential for school improvement and can lead to improved student outcomes.

2.4.3 Staffing

Staffing involves selecting, recruiting, and developing personnel to support the school's mission and goals. Effective staffing practices enable schools to attract and retain high-quality personnel and promote professional development. According to Glickman, Gordon, and Ross-Gordon (2014), staffing should be based on the school's needs and priorities and reflect best practices in personnel management.

Scheduling involves allocating time and resources to support the school's programmes and services. Effective scheduling practices enable schools to optimize the use of time and resources, reduce conflicts, and enhance student outcomes. According to Tomlinson (2014), scheduling should be based on the needs of students and teachers and reflect the school's mission and goals.

Classroom management involves creating a positive and supportive learning environment that promotes student engagement and achievement. Effective classroom management practices enable teachers to establish routines, manage student behaviour, and facilitate learning. According to Wong and Wong (2014), classroom management should be based on clear expectations, consistent consequences, and positive reinforcement.

2.4.4 Staffing

Staffing is an essential part of school management processes that involves selecting, recruiting, and developing personnel to support the school's mission and goals. Effective staffing practices

enable schools to attract and retain high-quality personnel and promote professional development

Human resource management (HRM) involves the development and implementation of policies and practices related to personnel management. Effective HRM practices enable schools to attract and retain high-quality personnel, promote professional development, and create a positive and supportive work environment. According to Lussier and Hendon (2018), HRM should be aligned with the school's mission and goals and reflect best practices in personnel management.

Recruitment and selection involve identifying and hiring personnel to support the school's mission and goals. Effective recruitment and selection practices enable schools to attract and retain high-quality personnel and promote diversity and inclusion. According to Kozlowski (2012), recruitment and selection should be based on the school's needs and priorities, reflect best practices in personnel management, and be transparent and fair.

Professional development involves providing opportunities for personnel to improve their knowledge, skills, and abilities to support the school's mission and goals. Effective professional development practices enable schools to promote continuous learning, enhance employee performance, and improve student outcomes. According to Darling-Hammond, Hyler, and Gardner (2017), professional development should be based on the school's needs and priorities, reflect best practices in personnel management, and be ongoing and job-embedded.

Performance management involves setting expectations, providing feedback, and evaluating performance to support the school's mission and goals. Effective performance management practices enable schools to promote continuous improvement, enhance employee performance, and improve student outcomes. According to Tucker and Codding (2018), performance

management should be based on clear expectations, timely feedback, and ongoing coaching and support.

Recruitment and selection involve identifying and hiring personnel who possess the knowledge, skills, and attitudes required to support the school's mission and goals. Effective recruitment and selection practices enable schools to attract and hire high-quality personnel who are a good fit for the school's culture and values. According to Reynolds and Cuttance (2015), recruitment and selection should be based on evidence-based practices and involve the participation of multiple stakeholders.

Professional development involves providing opportunities for personnel to enhance their knowledge, skills, and abilities to support the school's mission and goals. Effective professional development practices enable schools to improve employee performance, increase employee satisfaction, and promote organizational effectiveness. According to Fullan (2014), professional development should be based on the school's needs and priorities and involve ongoing support and feedback.

Performance management involves setting performance goals, providing feedback, and evaluating employee performance to support the school's mission and goals. Effective performance management practices enable schools to enhance employee performance, promote accountability, and improve organizational effectiveness. According to Kim and Choi (2017), performance management should be based on clear expectations, objective criteria, and ongoing communication.

Workforce diversity involves promoting diversity and inclusion in the school's personnel to support the school's mission and goals. Effective diversity practices enable schools to enhance employee satisfaction, promote equity and inclusion, and improve student outcomes.

According to Altbach and Knight (2007), workforce diversity should be based on the school's commitment to equity and inclusion and involve the participation of multiple stakeholders.

Recruitment and selection involve identifying and hiring personnel who have the necessary qualifications, skills, and experience to support the school's mission and goals. Effective recruitment and selection practices enable schools to attract and retain high-quality personnel who are committed to student success. According to Collins (2016), recruitment and selection should be based on evidence-based practices and reflect the school's culture and values.

Professional development involves providing personnel with opportunities to develop new skills, acquire new knowledge, and enhance their professional growth. Effective professional development practices enable schools to build a talented and skilled workforce that is capable of meeting the evolving needs of students and stakeholders. According to Darling-Hammond, Hyler, and Gardner (2017), professional development should be aligned with the school's goals and priorities and reflect best practices in teaching and learning.

Performance management involves setting goals, providing feedback, and evaluating personnel performance to support professional growth and enhance student outcomes. Effective performance management practices enable schools to promote accountability, recognize achievement, and address areas for improvement. According to Killion and Harrison (2017), performance management should be based on clear expectations, frequent feedback, and ongoing support.

Retention and succession planning involve developing strategies to retain high-quality personnel and prepare for leadership transitions. Effective retention and succession planning practices enable schools to build a stable and sustainable workforce that supports organizational continuity and promotes student success. According to Johnson (2015),

retention and succession planning should be based on a comprehensive understanding of the school's workforce and reflect the needs and preferences of stakeholders.

2.4.5 Coordinating

Coordinating is a critical component of school management processes that involves integrating activities, aligning resources, and building relationships to achieve the school's goals and objectives. Effective coordinating practices enable schools to optimize the use of resources, promote collaboration, and enhance student outcomes.

Collaboration and communication involve building relationships and sharing information with stakeholders to achieve common goals and objectives. Effective collaboration and communication practices enable schools to foster a culture of trust, respect, and engagement among stakeholders. According to Bryk and Schneider (2003), collaboration and communication should be based on shared decision-making, collective responsibility, and continuous improvement.

Resource allocation involves distributing resources to support the school's programmes and services. Effective resource allocation practices enable schools to align resources with the school's mission and goals and promote efficiency and effectiveness. According to Odden and Picus (2014), resource allocation should be based on a comprehensive understanding of the school's needs and priorities and reflect best practices in financial management.

Curriculum and instruction involve developing and delivering high-quality programmes and services that support student learning and achievement. Effective curriculum and instruction practices enable schools to promote student engagement, personalize learning, and enhance student outcomes. According to Darling-Hammond et al. (2020), curriculum and instruction should be based on evidence-based practices, reflect the needs and interests of students, and promote equity and access.

Partnerships and community engagement involve building relationships with external stakeholders to support the school's goals and objectives. Effective partnerships and community engagement practices enable schools to leverage resources, build community support, and enhance student outcomes. According to Epstein (2018), partnerships and community engagement should be based on mutual goals and objectives, shared responsibility, and ongoing communication.

Effective communication is essential for successful coordination in school management processes. Communication involves the exchange of information between different stakeholders, including teachers, administrators, parents, and students. Researchers have suggested that effective communication can enhance collaboration and promote a shared understanding of school goals (Goddard, Hoy, & Hoy, 2004).

Furthermore, effective communication can facilitate the development of positive relationships among stakeholders, which can improve trust and reduce conflicts (Leithwood &Riehl, 2003). Communication can be enhanced through various strategies, such as regular meetings, open-door policies, and the use of technology (Nketsia&Wiredu, 2015).

Another important aspect of coordinating school management processes is teamwork and collaboration. Collaboration involves the sharing of knowledge and skills among stakeholders to achieve common goals (Bryk et al., 2010). Researchers have suggested that collaboration can improve the quality of teaching and learning and increase student achievement (Coburn &Penuel, 2016).

Teamwork can be promoted through various strategies, such as professional learning communities (PLCs), teacher collaboration, and the use of data to inform decision-making (DuFour&Eaker, 1998). PLCs provide opportunities for teachers to work together to analyse student data, plan instruction, and share best practices (Vescio, Ross, & Adams, 2008). Teacher

collaboration involves working together to plan instruction, assess student progress, and provide feedback (Marks &Printy, 2003).

Leadership plays a critical role in coordinating school management processes. Effective leaders can promote a shared vision, establish clear goals, and provide support and resources to stakeholders (Fullan, 2002). Research suggests that effective leadership can improve teaching and learning and increase student achievement (Leithwood, Louis, Anderson, &Wahlstrom, 2004).

Effective leaders can promote collaboration, develop a positive school culture, and provide opportunities for professional development (Bryk et al., 2010). They can also create structures and processes to support coordination, such as regular meetings, communication protocols, and shared decision-making (Gronn, 2002).

Technology can also be used to support coordination in school management processes. Technology can facilitate communication, provide access to information, and support data-driven decision-making (Nketsia&Wiredu, 2015). For example, online platforms and social media can be used to share information and resources among stakeholders. Data management systems can provide teachers and administrators with timely and relevant information to inform instruction and decision-making (Marsh et al., 2005).

2.5 Relationship between E-record keeping and school management processes

Bakamane (2018) on electronic records management practices at companies and intellectual property authority in Gaborone in Botswana,results revealed that 75.4% of the study respondents indicated there was limited realization of e-records management benefits. However, the few companies which had realized and implemented e-records management were doing better in terms of retrieving necessary information. However, the study was outside academia as was the case with the current study.

Meanwhile, Nyampog (2015) studied electronic records management in national development. Basing on a desktop review of literature, findings revealed that electronic record management systems provide good results for achieving goals/objectives of an organization. This supposes that even in secondary schools carrying out electronic records, management is likely to improve on achievement of school goals and objectives. However, this was a desktop review of literature while this study was empirically examined.

In addition, Mukred and Yusof (2014) investigated electronic records management and its importance for decision making process in Yemen higher professional education. Results revealed that e-record keeping was an effective tool for effective management of schools. This information was recorded as being safely organized and kept with limited risks of distortion from external interferences. Also, there is a clear and safe carrying of this information unlike paper work which is not easy to manage. However, this study was not in the context of Uganda, and specifically secondary schools in Luwero District, where this study was carried out.

In contrast, Samuel and Nyarko (2014) revealed that ICT integrated systems of acquiring and storing data used to make analysis and take decisions regarding human resource performance, in so doing management is made more effective. Education record keeping practices vary substantially by size, institution, financial resource base and sophistication of their administrative practices (Aghuta, 2011). Furthermore, he asserts that they also vary as students move along the continuum from pre-school towards post-graduate education because the role of educational institutions varies along the same continuum. He reveals that generally, school administrators tend to get more concerned about records emanating from higher school levels, that is from colleges and post-graduate institutes/ schools than at secondary schools and below. The reason for this was unknown. As to what extent this was obtainable in Luwero District schools, have been uncovered by this study investigation.

Agheuta (2011) further observes that there seems to exist in a relationship between good records system in schools and the school administration. A related study carried out to establish the relationship between record management practice and decision making in Nigerian universities revealed that 16.7% were not aware of the organized system of records management prograrnme.73.8% of the respondents also reported that the records were kept with various principal officers while 57.9% indicated that there is abridged protocol for handling records in the various institutions. A sizable proportion of senate members of 84.7% indicated that they were not sure of the full ramifications of records management in their various institutions.

While 9.7% of the respondents indicated that they were aware of government policy on records management, 67.1% of the respondents reported that they were not aware of any budgetary allocations for records management in their institutions for records management. This implies that there were some forms of records management practices in place of all types of records. Further respondents' perceived records management practices and their decision making process showed a significant relationship between records management and administrative decision-making process. However, this study was carried out to establish the relationship between record keeping practices not e-records keeping and school management processes in Nigerian universities not secondary schools. And it was carried out in Nigeria not Uganda and particularly Luwero District. Therefore, this study was to determine the relationship between electronic record keeping and school management processes in Luwero District so as to close the already existing gaps identified in the literature reviewed.

Irrevocably, Iyede (2011) construed that the purpose of e-record keeping and management in schools is to ensure that accurate and proper records of students' achievements and growth, information on school activities and matters that will promote efficiency and effectiveness of the school system are kept and maintained. However, the extent to which Luwero district

Secondary school record keeping systems impact on their administration would be ascertained in this study.

Summary of literature gaps

The study fall short of content gaps in regards to empirical studies carried out in Luwero district on e-record keeping and school management processes.

More so, geographical gaps were identified as most studies carried out are of secondary sources which were not the major witnesses of the events and how schools are managed in Uganda and the various countries finding are not enough to be generalized into the context of Luwero district with diverse demographic and management structures.

Time gap was also another significant reason for the study. Some studies in education sector report and others in the e-record keeping in school management processes in Luwero district stopped in 2019 from the District officers report. So at the current time there was need to understand the state of improvement. So it was against this background that the study was carried out to establish the relationship between electronic record keeping and school management processes. A case of selected secondary schools in Luwero District.

<center>**CHAPTER THREE**</center>

<center>**METHODOLOGY**</center>

3.0 Introduction

Research methodology is the specific procedure or techniques used to identify, select, process, and analyse information about a topic (Warren, 2020). The methodology section allows the reader to critically evaluate a study's overall validity and reliability of the data. This chapter therefore presents the study design, population, sampling procedure and sample size, data collection methods, data collection instruments, data quality control, data analysis and presentation plan and ethical considerations.

3.1 Research design

Research design is defined as the structure of the study (Gay & Airasian, 2003). The study adopted descriptive cross-sectional survey design. A descriptive design was used when making descriptions of how e-record keeping influences management processes of secondary schools in Luwero District. A cross-sectional design is referred to as that design which involves collection of data from a big population at one point in time (Oso & Onen, 2009). The cross-sectional survey design was preferred in this study because itallowed collection of data from a big population at one point in time. It was also cost effective and fitted in the study programme, which offered limited time for research. For data collection and analysis, the study employed both qualitative and quantitative methodologies, supporting the triangulations necessary for contemporary scientific research. The study employed a quantitative research methodology, which entailed quantifying data in terms of numbers and statistics. In order to uncover data that was rich in insight, comprehension, explanation, and depth of information that could be justified statistically, the study used a qualitative technique to collect data from research participants with specific interests in relation to e-record keeping and school management processes.

3.2 Study Population

The study population was 1000 respondents comprising 960 teachers and 40 school administrators selected randomly from 5 secondary schools in Luwero District. Teachers were involved in the study because they were the ones affected by inappropriate management processes in the selected secondary school while school administrators were involved in the study because they were the ones responsible for ensuring that ICT was utilized in the management processes of these schools.

3.3 Sample size

The study sample size was computed using the Krejcie and Morgan formula of Sample Size Determination (1970). This is supported by the formula below:

$$s = \frac{NP(P)(1-P)}{(NP-1)\left(\frac{B}{C}\right)^2 + P(1-P)}$$

Whereby;   S=sample size

NP=Population size = 1000

P=Number expected to answer a certain way which is 50% =0.5

B=Sampling error = 5% = 0.05

C=Confidence level. The level of confidence used by most researchers is 1.960

Therefore, by substituting the variables and calculating for the sample size, S,

$$s = \frac{1000(0.5)(1-0.5)}{(1000-1)\left(\frac{0.05}{1.960}\right)^2 + 0.5(1-0.5)}$$

$$S = \frac{250}{999X0.0006507751 + 0.25}$$

$$S = \frac{250}{0.9001243249}$$

$$S = 277.71$$

The total sample size is approximately 278

Therefore, sample size is = 278

The sample size comprised a representative sample of 278 in total, with a sample selection of 11 school administrators and 267 teachers.

Table 3.1 sampling methodological matrix

Sample size per stratum $= \frac{SampleSize}{TotalPopulation}$ x StratumSize

N =1000

Category	Population	Sample size	Sampling technique
Teachers	960	267	Simple random sampling
			Stratified sampling
School Administrators	40	11	Purposive
Total	**1000**	**278**	

Source: Krejcie and Morgan (1970) table

3.4 Sampling procedure

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals selected represent the large group from which they were selected (Ogula, 2015). The study employed both probability and non-probability sampling techniques. Probability sampling involved everyone with an equal chance of being selected. Probability sampling procedures include: simple random sampling, and stratified sampling techniques to select the

various 5 schools and the teachers who participated in the study.Simple random sampling was used to ensure that every member of the sample population had an equal and independent chance of being included in the sample. It was time-saving and less expensive to conduct.

Non-probability sampling is used in some situations where the population may not be well defined and in other situations where there may not be great interest in drawing inferences from the sample to the population. The study adopted purposive sampling technique. According to Amin (2005), purposive sampling is the type of sampling where the researcher uses his judgment or common-sense regarding participants from whom information is collected. Purposive sampling was used because the researcher needed to gain firsthand information from the respondents and compare the responses in analysing the relationship between e-record keeping and school management processes.Though time-consuming and much expensive, it helped to reduce the bias that arose from using a single approach.

3.5 Sampling techniques

3.5.1 Simple random sampling

Mugenda and Mugenda (2019) explain that the goal for simple random sampling is to achieve desired presentation from the members of accessible population. This sampling technique involved picking teachers at random without discrimination and all samples were given equal chances of being selected for the study.

3.5.2 Stratified Sampling

Stratified sampling technique is a sampling strategy that categorizes study elements with homogenous characteristics into one group (Amin, 2005). The teachers were sampled using stratified random sampling depending on the school's ownership. Teachers were stratified based on their ownership -- either private or public ownership. Stratified sampling was used since these respondents had homogenous characteristics based on their areas of professionalism; thus it allowed representation of all categories appropriately.

3.5.3 Purposive sampling

Purposive sampling technique is a sampling strategy that is used on key respondents or informants with confidential information (Oso and Onen, 2009). Secondary school administrators within Luwero District were sampled purposively basing on the responsibilities they had in making ICT policies and utilizing them in school management processes.

By adopting purposive sampling technique, the researcher selected respondents including record managers, ICT technicians of the selected secondary schools and the beneficiaries of E-records services. Yoko and Onen (2015) emphasize that purposive sampling helps a researcher to decide on whom to include in the sample to apply expert knowledge. Records staff and administrators were selected because of their daily roles at their work place and expert knowledge required for the study.

3.6 Data collection methods

Both quantitative and qualitative data collection methods were employed in the study. Primary data were collected using questionnaire and interview methods. Use of multiple data collection instruments was used to check the validity of the study findings; this allowed generalization of results to the target population.

3.6.1 Questionnaire survey method

A questionnaire is a document that includes a set of questions that require responses (Touliatos & Compton, 2018). Questionnaire survey method was used to collect data from the teachers and the administrators of selected secondary schools because the study was concerned with variables that could not be directly observed, and thus required respondents' views, opinions and feelings. Closed-ended questions were also be used to obtain responses because as Mugenda and Mugenda (2013) observed, they were easier to administer as each item was followed by alternative answers. The questionnaire was structured under sections where section A included background information; section B involved the independent variable; and section

C the dependent variable. The researcher self-administered the questionnaires to the respondents for data collection.

3.6.2 Interviews method

An interview is a face-to-face interaction between the interviewer and the interviewee (Fontana & Frey, 2005). The researcher interviewed research participants orally and wrote down memos and extracting the common themes of every interview sessions and matching them to the designated research objectives. These interviews were intended to gather information from participants with professional knowledge about the study, such as school administrators. Data from interviews supplemented the secondary data given the temporal and spatial differences. Only key informants were interviewed since they were aware of the e-record keeping usage in the management process of the school.

3.7 Data collection Instruments

The study adopted self-administered questionnaires and interview guides as the main instruments of data collection.

3.7.1 Questionnaire

A self- administered questionnaire with structured and closed-ended questions was the main data collection tool. This questionnaire was for teachers in the selected secondary schools. The questionnaire was categorized into section A on teachers' bio-data, B on school management processes section C on electronic record keeping uses. A self-administered questionnaire was used due to the ease it offered in the distribution to a big number of the study population. It helped in the prevention of interference of the researcher with the data given, thus confidentiality was possible with its use.

3.7.2 Interview guide

An interview guide was the second data collection instrument and the interviews were subjected to eleven administrators from five schools. A section of the interview guide was followed by the three respective objectives. Questions were open-ended and the researcher

asked the questions while making notes. The interview guide was used to ask school administrators within the selected secondary schools to give detailed information about study concepts. It was used to help fill the gaps that the self-administered questionnaire would not have covered.

3.8 Validity and Reliability

3.8.1 Validity

Validity is the extent to which the instrument measures what it was intended for (Kakinda-Mbaaga, 2000). The validity of the instruments was done with the help of experts like the supervisors from Kabale University. Basing on this, validity of the questionnaire was done using content experts from the supervisors. The supervisors were given the instruments to judge the questions as either relevant or irrelevant after a content validity index was calculated using a formula where;

$$CVI = \frac{Number\ of\ items\ judged\ right}{Total\ items\ in\ instrument}$$

$$CVI = \frac{23}{24}$$

CVI=0.958

This instrument was valid at a high positive validity of **0.958**. In confirmation, Kakinda-Mbaaga (2000) construed that an instrument is considered valid when the final or computed value is greater than 0.5.

3.8.2 Reliability

Reliability of instruments was established using Cronbach Alpha method. A number of 10 questionnaires werebeing pre-tested among teachers in Luwero District. Thus, data derived was entered into computer using SPSS version 21. The rest of the questionnaires were offered to respondents for data collection purposes.

In order to guarantee reliability, the researcher run a reliability statistic using scale Cronbach Alpha to determine the consistency of the research instrument results.

Table 3.2: Reliability Statistics

Cronbach's Alpha	N of Items
.988	23

Source: Primary data (2023)

The test above indicated that Cronbach's alpha range is at **α =0.988,**which meant a high level of internal consistency for the scale with this specific study instrument which was in line with the confirmation by Creswell (2009) who opined that with the use of Cronbach Alpha method the reliability of an instrument is reliable once they are greater than 0.5.

3.9 Data Collection Procedure

With the approval of the proposal, an introductory letter was issued from Kabale University to introduce the researcher to administrators in Luwero District. In addition, the researcher wrote a personal introductory letter requesting respondents to give primary data and required responses. This was followed by testing for reliability and validity of the study instruments. Afterwards, two research assistants from Luwero District were recruited and trained to help administer questionnaires to the respective respondents. Collected data was analysed, followed by writing of the final report submitted to Kabale University for examination.

3.10 Data analysis and presentation plan

Data analysis is the process of systematically applying statistical and logical techniques to describe and illustrate, condense and recap, and evaluate data (Shamoo & Resnick, 2013). According to Kombo and Tromp, (2009) data needs to be sorted, edited, coded and classified to make it more meaningful. Both qualitative and quantitative data wereanalysed to make it more meaningful. According to Sekaran (2003), editing the collected raw data is important

because it checks incompleteness and inconsistencies in the data collected and clarity immediately sought from the respondents in that regard.

Collected data, both quantitative and qualitative, were compiled, sorted, edited and coded to have the required quality, accuracy and completeness. It was entered into the computer for analysis using Statistical Package for Social Sciences (SPSS) version 21. The SPSS computer programme facilitated logical analysis using charts and tables. Correlations were carried out to measure the level of e-record keeping usage on the school management process of selected secondary schools in Luwero District. Coefficients correlation and t-tests were also used to define the direction of the relationship and hypothesis of the variables. The results werepresented in descriptive formats in form of tables. The qualitative data collected through interviews wasanalysed based on narration and citing the respondents' views. A conclusion was made based on the subjective decision of the researcher on the objectives of the study. The classification, analysis, and interpretation of the collected data was done in accordance with the objectives of the study.

3.11 Ethical considerations

This refers to the integrity involved in conducting a research to ensure that law and order was maintained (Hair, 2010). Issues frequently realized in ethics include, among others: plagiarism, consent by relevant authorities before engaging in a research, use of faulty methods and procedures of data collection, and misleading authorship. The researcher was keen to ensure that all ethical issues were adhered to during the whole process of research. To make this successful, the respondents were assured that the study was purely for academic purposes and that the information collected was confidential and analysed for this research only. During the distribution of questionnaires, caution was taken not to induce or put any respondent under any form of pressure to become part of this study by first seeking the consent of the respondent to participate in the study.

The researcher further assured them that no information revealing the identity of any individual would be included in the final report or in any other communication prepared in the course of the study, unless the individual concerned had consented in writing to its inclusion. The researcher also obtained permission from the head teachers of the selected secondary schools to grant approval to carry out the study.

Information used in this study from other sources and authors was duly acknowledged to retain the authenticity of this research.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND DATA ANALYSIS

4.0 Introduction

This chapter presents the findings regarding the relationship between electronic record keeping and school management processes: A case of selected secondary schools in Luwero District, which have been discussed under the subsequent sessions and sub sections in line with the study objectives.

4.1 Questionnaire return rate

The total sample for the study was 267 respondents that were sampled using a standard self-administered questionnaire. The presentation below shows the return rate after the study with the questionnaire.

Table 4.1: Showing Questionnaire Return Rate

Categories	Frequency	Percent (%)
No of questionnaires sampled	267	100
No of questionnaire returned	267	100
Total	267	100

Source: Field data (2023)

Table 4.1 above shows that 267 questionnaires were given out, and 267 of them had a 100% response rate (n = 267). Given that Mugenda and Mugenda (2003) claim that a response rate of at least 70% is sufficient, this was a sign of a high return rate. This was achieved because of the respondents' cooperation and willingness to participate in the study and after being assure of the confidentiality and the purpose of the study. This saved time and gave rise to accuracy in the study findings.

4.2 Demographic characteristics of respondents

The gender of the respondents was as well crucial for the study. Table 4.2 below presents the statistical values of the different respondents who participated in the study.

Table 4.2 Showing Gender of the respondents

	Frequency	Percent (%)
Male	127	47.6

	Frequency	Percent (%)
Female	140	52.4
Total	267	100.0

Source: *primary data* (2023)

Vividly, table statistic in 4.2 above indicates that 47.6% (n=127) were male whereas 52.4% (n=140) were female. By sex, the rate of females in the teaching profession in Luwero District is higher than males. It was vital to understand their opinions regarding school management processes and e-record keeping and in the selected secondary schools in Luwero District.

The age of the participants was also crucial to the study. The findings are represented in Table 4.3 below.

Table 4.3 Respondents by Age

	Frequency	**Percent (%)**
Below 30 years	85	31.8
30-39 years	106	39.7
40-49 years	64	24.0
50+ years	12	4.5
Total	**267**	**100.0**

Source: *Primary data* (2023)

From Table 4.3 above, the age of the respondents showed that 31.8% (n=85) were aged below 30 years. 39.7% (n=106) were in the age bracket of 30-39 years. 24.0% (n=64) and 4.5% (n=12)

were in the age range of 40-49 years and 50 years + respectively. In turn this affirmed that the understanding of the respondents in regard to e-record keeping in school management was at a high maturity stage and they were able to give their response in transparency and truthfulness of what was in existence in the selected schools in Luwero District.

Furthermore, the level of experience of the respondents was sought and Table 4.4 below has the details of how they responded.

Table 4.4: Response on participant of Work Experience

	Frequency	Percent
Less than 4 years	41	15.4
5-9 years	110	41.2
10+ years	116	43.4
Total	**267**	**100.0**

Source: *primary data* (2023)

Looking at the findings in Table 4.4above, they showed that the highest level of experience of teachers in the selected schools in Luwero District fell within 10+ years of 43.4% (n=116) over those with 5-9 years of work experience of 41.2% (n=110). The least had 15.4% (n=41) less than 4 years' work experience. In summary, the teachers were experienced in the teaching profession, hence they were aware of the existing e-record keeping in the school management processes.

Consequently the different management levels were assessed because they are the ones who manage these system. Table 4.5 has the findings.

Table 4.5 indicating the Management levels in schools

	Frequency	Percent (%)
Top level	10	3.7
Middle level	46	17.2
Junior stuff	211	79.0
Total	**267**	**100.0**

Source: *primary data* (2023)

Table 4.5 above showed that 79.0% (n=211) of teachers were at level of junior staff followed by 17.2% (n=46) at the middle level of management and only 3.7% (n=10) at top level. The least rate at the top management level was an indication that the management system was still low and that could be the reason why the implementation of e-record keeping was still lagging in the school management processes.

The level of education of the respondents was sought in Figure 4.1 below regarding whether they had the required education attainment to participate in the study.
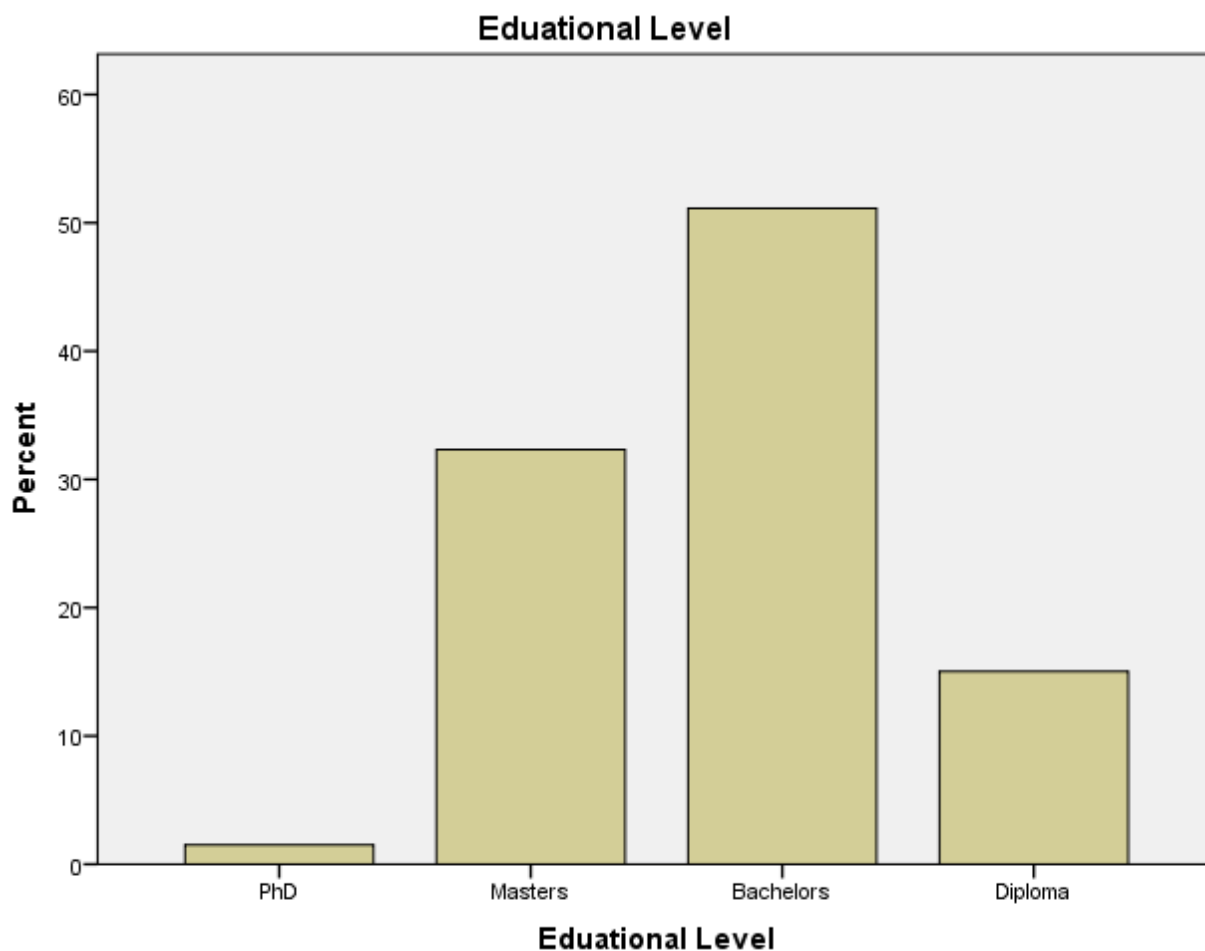
Source: Primary data (2023)

Fig 4.1 Respondents education level

In Figure 4.1 above, the findings indicated that the highest level of education of the respondents in the selected secondary schools in Luwero District was at 50.9% (n=136) having a Bachelor's degree, followed by 32.6% (n=87) who had attained Master's degree and 15% (n=40) having attained a Diploma, while only 1.5% (n=4) have attained PhD. The study findings showed that the teachers in Luwero District had attained at least the required education level that could help them implement e-record keeping in the school management processes.

4.3 Objective 1:The level of e-record keeping usage

The respondents were asked to what extent they agreed with the following statement: What is the level of e-record keeping usage in selected secondary schools in Luwero District? The findings in Table 4.6 indicate how they responded. Data was collected using the Likert Scale of strongly agree, agree, undecided, disagree and strongly disagree to determine their level of response through multiple response analysis.

Table 4.6: Indicating the level of e-record keeping usage

Case Summary

		Cases				
	Valid		**Missing**			**Total**
	N	Percent	N	Percent	N	Percent
e-record	228	85.4%	39	14.6%	267	100.0%

a. Dichotomy group tabulated at value 1.

e-recordkeeping Frequencies		Responses		Percent o
		N	Percent	f Cases
e-record	Admission of students are done electronically	21	7.4%	9.2%
	Students' bio-data is electronically kept	47	16.5%	20.6%
	Teachers bio-data is electronically kept	16	5.6%	7.0%
	Teachers performance records are electronically kept	83	29.2%	36.4%
	Exam records in the school are electronically kept	31	10.9%	13.6%
	Attendance records of employees are electronically kept	32	11.3%	14.0%
	Some records kept in your school are related to financial transactions	31	10.9%	13.6%
	Some records kept electronically relate to administrative data	23	8.1%	10.1%
Total		284	100.0%	124.6%

a. Dichotomy group tabulated at value 1.

Source: *Field data* (2023)

Table 4.6 above shows vividly that the highest level of e-record keeping was observed on teachers' performance records were electronically kept was at a degree of 29.2% (n=83), followed by 16.5% (n=47), indicating that students' bio-data was electronically kept. Furthermore, the findings showed that attendance records of employees were electronically

kept at degree of 11.3% (n=32), followed by some records kept in your school were related to financial transactions and exam records in the school were electronically kept at the same degrees of 10.9% (n=31). On the other hand the least level of e-record keeping was shown to be that some records kept electronically related to administrative data with 8.1% (n=23), admission of students were done electronically at a degree of 7.4% (n=21) and teachers bio-data was electronically kept, 5.6% (n=16).Overall the level of e-record keeping was very low as all the findings were < 50%. Hence the researcher attributed these tolow level of e-record keeping in the school management processes. Hence the e-record keeping had an impact on school management processes.

Objective One: Interview questions on the level of e-record keeping usage in selected secondary schools in Luwero District

Do you carry out electronic record keeping?

N=11

YES	NO
8	3

In my school not yet fully… **[Interview A] (YES)**

I have practically used it in my school for records… **[Interview B] (YES)**

Yes, I do but not always… **[Interview C](YES)**

It is a bit challenging to perform… **[Interview D](YES)**

I would do it quicker on paper than fighting with mouse... **[NO**

It is hectic though it is good… **[Interview F](YES)**

Not at all… **[Interview G](NO)**

It is done but I normally ask for assistance… [Interview H](YES)

I usually use it….....(Interview I) (YES)

We don't have electricity….(Interview J) (NO)

It is difficult to retrieve information (Interview K)(YES)

What are the uses of e-record keeping?

...To keep information in the same form and content for a longer period of time [Interview A] (Perceived Usefulness)

...Keeps information in a small space other than having to occupy a lot of space with papers, books or files [Interview B] (Perceived Usefulness)

...Store information in a way that it can be accessed anywhere in the world [Interview C] (Perceived Usefulness)

… It helps to make files organized [Interview D] (Perceived Usefulness)

… It gives file names and easily to make proper documentations [Interview E] (Perceived Usefulness)

… Having files electronically makes it easy for me to download it from any place not carrying books to the ministry [Interview F] (Perceived Usefulness)

...It helps to remove errors that can easily be omitted manually [Interview G] (Perceived Usefulness)

...E-record keeping is essential in tracking of information with exact dates and keeping it safe [Interview I] (Perceived Usefulness)

… It saves time and bad news of document is lost or water or termites have destroyed our shelves [Interview J] (Perceived Usefulness)

The table provides insight into the perceived uses of e-record keeping as reported by the users.

Response	Number
Accessibility	3
Perceived Usefulness	2
User friendliness	2
Relative advantage	1

Accessibility: This indicates that three users recognized the benefit of e-record keeping in terms of improved accessibility to records, possibly referring to the ease of retrieving and accessing information electronically.

Perceived Usefulness. This suggests that two users acknowledged the value and usefulness of e-record keeping in their work or operations, potentially in terms of better information management, decision-making, or efficiency.

User-friendliness: This implies that two users found e-record keeping to be user-friendly, indicating that the system or product was easy to navigate, understand, and use in managing records.

Relative Advantage: This indicates that one user recognized the comparative advantage of e-record keeping over other traditional record-keeping methods, potentially in terms of enhanced data security, accessibility, or efficiency.

.

Which types of records do you keep electronically?

<u>Concepts</u>

- Finance

- Students records

- Documents of reports

- results UNEB

- some important emails

- activities of the school

- Budgets

This shows that the administrators only kept records of finances, student's records and other documents of report that might be valuable to the school. From the findings it could be deduced that they had limited knowledge of what type of records to keep electronically. If properly implemented, e-record keeping could enhance their ability to save all information by partitioning it electronically in the electronic devices instead of having a lot of shelves and drawers filled with papers and records that were difficult to search for in case of urgency.

What is the significance of e-record keeping over other modes of record management?

Concept derived

- It saves time

- It is easy to save

- It accommodate large files

- It is easily accessible

- It is safe

It is very essential to note that the major importance of e-record keeping over other method of records was the safety, accessibility, accommodation and time-saving quality for operation and generation of a report.

4.4 Objective 2:The management processes in schools

Respondents were asked:What are the management processes in selected secondary school in Luwero District? Their levels of agreement were presented in Table 4.7 below.

Table 4.7: Indicating management processes in schools

Case Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Managementprocesses	248	92.9%	19	7.1%	267	100.0%

a. Dichotomy group tabulated at value 1.

Managementprocesses Frequencies

		Responses		Percent of Cases
		N	Percent	
Management Processes in Schools	The school forecasts and anticipates risks for effective operations	106	16.7%	42.7%
	Staff do the various roles assigned to them in the school	101	16.0%	40.7%
	Different departments are well coordinated	66	10.4%	26.6%
	The school has a well-developed Organization structure	78	12.3%	31.5%
	The school management track progress and trends that may need further investigations	79	12.5%	31.9%
	Staff work under guidance, influence and supervision	116	18.3%	46.8%
	The school tracks its revenue and expenses under the budget	87	13.7%	35.1%
Total		633	100.0%	255.2%

a. Dichotomy group tabulated at value 1.

Source: *primary data* (2023)

Table 4.7 tracked the responses for the question "what are the management processes in school?". Staff work under guidance influence and supervision was rated at a degree of 18.3% (116), followed by the school forecasts and anticipates risks for effective operations at a degree of 16.7% (106), and staff do the various roles assigned to them in the school at a degree of 16.0% (n=101). Furthermore, the findings showed that other management processes in school with least percentages were: the school tracks its revenue and expenses under the budget at a degree of 13.7% (n=87);the school management track progress and trends that may need further investigations, 12.5% (n=79); the school has a well-developed Organization structure, 12.3% (n=78); and Different departments are well coordinated at a degree of 10.4% (n=66). Overall, the management processes were very poor as all the findings were< 50%. Hence the researcher attributed these to lack of e-record keeping to enhance the school management processes. Affirmatively, e-record keeping would enhance the management processes in schools by helping them track and keep their records for easy planning, staffing, monitoring and controlling of the school management processes.

Objective two: interview question on the management processes in selected secondary school in Luwero District

Do you have qualified staff to perform e-record keeping?

     (N=11)

Yes	No
3	**8**

This showed that there were few qualified staff to perform e-record keeping. Hence this study saw this as a challenge that the schools must tackle urgently to enable them have a proper integration of e-record keeping.

What challenges do you experience with e-records keeping?

Categorization of concept

- No computers to use
- No internet
- Complicated software to be used for record keeping
- Lack of skills
- Rigidity to adopt change
- Power source interruption

The participants affirmed that their major challenges were inadequate computers to use for e-record keeping. Internet sources were also a barrier coupled with complicated software to be used. Nonetheless they also registered not having the required skills to operate daily using e-record management system and this brought about the rigidity to adopt the change from book keeping to e-record keeping. Power source interruption was the last challenge that was complained about as some schools had no electricity connections.Others used solar system and if this was to be functional there was need for infrastructural development and installation of computers and training for efficient and effective use and integration of e-record keeping in the school management processes.

4.5 Objective 3: The relationship between e-record keeping and school management process

This section aimed at establishing the relationship between e-record keeping and school management process in the selected secondary schools in Luwero District. Regression analysis was also run to test the null hypothesis; H_0: There is no significant relationship between e-records keeping and school management processes in selected secondary schools in Luwero District. Table 4.8 below has the test result.

Table 4.8: Shows the model summary of linear regression model

		Model Summary		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.303[a]	.092	.078	.37047

a) Predictors: (Constant), Perceived usefulness, User friendliness, Social factors, relative advantage

Source: *primary data* (2023)

This summary is of a linear regression model that aims to predict an outcome variable based on four predictor variables: perceived usefulness, user friendliness, social factors, and relative advantage.

The model summary indicates that the model has a multiple R (correlation coefficient) of 0.303, indicating a weak positive correlation between the predictors and the outcome variable. The R square value of 0.092 indicates that the predictors explain only 9.2% of the variation in the outcome variable.

The adjusted R square value is 0.078 which is slightly lower than the R square value, indicating that the model may be slightly over fitting the data. The standard error of the estimate is 0.37047, which indicates the typical difference between the predicted values and the actual values.

The model,therefore, suggests that the four predictor variables have a weak relationship with the outcome variable and that there may be other important variables that are not included in the model.

Table 4.9 Showing Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.639	4	.910	6.629	.000
	Residual	35.959	262	.137		
	Total	39.599	266			

a) Dependent Variable: Management Processes

   b) Predictors: (Constant), Perceived usefulness, User friendliness, Social factors, relative advantage

 Source: *primary data* (2023)

The ANOVA table shows the analysis of variance results for the linear regression model, which tests whether the model's predictor variables significantly predict the outcome variable. The sum of squares for each source of variation is a measure of the amount of variation in the outcome variable that is explained by each source. In this case, the sum of squares for the regression term is 3.639, indicating that the predictor variables explain a significant amount of variation in the outcome variable.

The degrees of freedom (df) for the regression term are 4, representing the number of predictor variables in the model. The mean square for the regression term is 0.91, indicating that the predictor variables explain an average of 0.91 units of variation in the outcome variable.

The F-test statistic for the regression term tests the null hypothesis that the regression term does not explain a significant amount of variation in the outcome variable. In this case, the F-test statistic is 6.629, indicating that the predictor variables significantly predict the outcome variable.

The Sig. represents the p-value for the F-test statistic, which indicates the probability of observing the F-test statistic or a more extreme value under the null hypothesis. In this case, the p-value is 0.000, which is less than the significance level of 0.05 and suggests that the predictor variables (Perceived usefulness, User friendliness, Social factors, relative advantage) significantly predict the outcome variable.

Table 4.10 shows statistical relationship between e-record keeping and school management processes

Coefficients						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.639	4	.910	6.629	.000
	Residual	35.959	262	.137		
	Total	39.599	266			

a. Dependent Variable: Management Processes

b. Predictors: (Constant), Perceived usefulness, User friendliness, Social factors, relative advantage

Source: *primary data* (2023)

The ANOVA table shows the analysis of variance results for the linear regression model, which tests whether the model's predictor variables significantly predict the outcome variable. The sum of squares for each source of variation, which is a measure of the amount of variation in the outcome variable that is explained by each source. In this case, the sum of squares for the regression term is 3.639, indicating that the predictor variables explain a significant amount of variation in the outcome variable.

The degrees of freedom (df) for the regression term are 4, representing the number of predictor variables in the model. The mean square for the regression term is 0.91, indicating that the predictor variables explain an average of 0.91 units of variation in the outcome variable.

The F-test statistic for the regression term, which tests the null hypothesis that the regression term does not explain a significant amount of variation in the outcome variable. In this case, the F-test statistic is 6.629, indicating that the predictor variables significantly predict the outcome variable.

The Sig. represents the p-value for the F-test statistic, which indicates the probability of observing the F-test statistic or a more extreme value under the null hypothesis. In this case, the p-value is 0.000, which is less than the significance level of 0.05 and suggests that the predictor variables (Perceived usefulness, User friendliness, Social factors, relative advantage) significantly predict the outcome variable.

Table 4.11 Correlations statistics of e-record keeping and school management processes

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	579.567[a]	216	.000
Likelihood Ratio	445.613	216	.000
Linear-by-Linear Association	35.380	1	.000
N of Valid Cases	**267**		

a. 242 cells (98.0%) have expected count less than 5. The minimum expected count is .01.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	1.473	.000
	Cramer's V	.425	.000
N of Valid Cases		267	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Source: *primary data* (2023)

In addition to proving the relationship between e-record keeping and school management processes, Table 4.9 above detailed that a chi-square test of significance 579.567/216=2.6831--taking the square of $(2.6831)^2= 7.20$ --indicating that there is 72.0% positive significant relationship between e-record keeping and school management processes of p<.05. (P < 0.000, φ=1.473).The count showed that 98% expected counted was less than 5%. The minimum expected count is .01. The degree of impact as indicated by φ=1.473 implies that e-record keeping has a moderate effect on school management processes. The significant level of P<0.000 implies that school management process depends on e-record keeping and these

variables are not independent of each other. Therefore, it is confirmed that there is a significant relationship between e-record keeping and school management processes in the selected secondary schools in Luwero District.

Objective three: interview questions on the relationship between e-record keeping and school management processes in the selected secondary schools in Luwero District

What is the influence of electronic record keeping on school management processes?

…change in record keeping method [Interview G]

…it can help the management in planning and decision making for the school [Interview H]

…It affects the way information is kept [Interview I]

…it reduces manipulation of financial reports in the school management system [Interview J]

In summary the participants gave their views that e-record keeping enhances the way information is kept in the school management system as well the mode of record keeping that is in place. Furthermore, it stressed that e-record keeping decreases financial manipulation and aids management in their plans and decision making.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The aim of this study was to establish the relationship between electronic record keeping and school management processes: A case study of selected secondary schools in Luwero District. This chapter provides a backdrop from the documentary reviews that supports the discussion, conclusions, and suggestions of the study based on the results in line with the objectives.

5.1 Discussion

5.1.1 The level of e-record keeping usage in secondary school schools

Objective two sought to ascertain the level of e-record keeping usage in selected secondary schools in Luwero District. Evidently, Table 4.6 confirmed that the level of e-record keeping in schools was low; showed that the highest level of e-record keeping was observed on teachers performance records are electronically kept was at a degree of 29.2% (n=83) followed by 16.5% (n=47), indicating that 'students' bio-data is electronically kept'. Furthermore, the findings showed that 'attendance records of employees are electronically kept at degree of 11.3% (n=32)' followed by 'some records kept in your school are related to financial transactions' and 'exam records in the school are electronically kept at the same degrees' of 10.9% (n=31). On the other hand the least level of e-record keeping was shown to be that 'some records kept electronically relate to administrative data' with 8.1% (n=23), 'admission of students are done electronically' at a degree of 7.4% (n=21) and 'teachers bio-data is electronically kept', 5.6% (n=16). Overall the level of e-record keeping was very low as all the findings were < 50%. Hence the researcher attributed these to low level of e-record keeping in the school management processes. Hence the e-record keeping had an impact on school management processes. On confirmation, Saffady (2014) sees electronic records as informational or data files that are created and stored in digitized form through the use of computers and application software. They are stored on various magnetic and optical storage devices and are products of computer software.

Most of the times teachers found it hard to electronically keep records in that most of the teachers had no access to technology as one of the requirements to have records kept electronically. Some teachers do not have the skills in keeping these records electronically

since that is where the world is going because schools will not continue to keep hard copies for long time.

It is true that some schools are located in areas where there is no electricity, which implies that few or no teachers will keep records electronically. The government needs to train teachers and other stakeholders to help teachers keep records electronically.

The study of Agheuta (2021) was in confirmation with the study findings and he called for all the schools to implement e-records management programme that ensures reliable and adequate vital records in place are highly advocated for. He points out that all the school staff should have accessibility to records relevant to their operations except confidentially if the schools are to function well. He advises that the Head teachers should make sure that all vital school records are kept and maintained safely to allow current and future school functioning. In support of the foregoing, Iyede (2017) advised that every organization/school must have structures and systems in place that support the proper management of records in compliance with the standards in place.

A study by Batty (2019) also supports the foregoing e-records management arrangements for all catalogues should be prepared and displayed in a convenient place for quick reference of all public records. Halliday (2019) observes that record keeping systems in organizations take the following forms: Paper, Micrographic and Electronic formats. He says that whereas the electronic record keeping system is a system in which records are captured, stored and disseminated electronically through ICT gadgets like computers, scanners, among others, the paper-based records are very manual in operation and quite bulky to keep and be maintained.

Most important to note is that Ogutta, Egesa, Musiega (2014) revealed that the day-to-day management of schools in terms of making informed decisions on staff performance, directing, coordinating activities would be almost impossible without e-record keeping. Passay (2018) in a desktop review of Literature about ICT and school management established that management of schools in the spheres of planning, staffing and controlling of school activities was a serious challenge in the school management process. However, this literature revealed that since the Inception of ICTs usage to make proper e-records, these aspects of school management process have been made easy, leading to the attainment of management goals. Besides, the reviewed study was a literature assertion whereas this current study was empirical.

In the same vein, Kallaus (2019) pointed out that records irrespective of the format in which they manifest themselves are the memory of organizations. That should therefore be kept so that the present and future generations can keep track of what has been happening in organizations to enhance their operations. Furthermore, Galiwango (2019), while spelling out the roles of record keeping in schools, remarked that they provide a reference point, a legal framework and foundation upon which sound decisions, plans, budgets, reports, among others, are based. Tomer (2018) also holds a similar view when he stresses that records should be well kept since they convey instructions and procedures regarding organizational transactions.

Preferably, for proper adoptability of e-record keeping, the school management should put in place various management processes like planning, organizing, staffing and controlling these activities for smooth running, accountability and accuracy in its implementation, monitoring and reporting procedure.

The researcher believes that management processes in schools involve managing the academic programmes of the school, including curriculum development, student assessment, and academic standards. This also includes managing teacher performance and development. It also involves managing the finances of the school, including budgeting, financial planning, and accounting. Financial management also includes the management of resources such as facilities, technology, and equipment. However, if school leaders lack the necessary skills and knowledge to effectively manage the school, it can lead to gaps in the management processes. This can include ineffective decision-making, poor communication, and a lack of direction. As mentioned earlier some schools do not have adequate resources, which can lead to gaps in management processes. This can include insufficient funding, outdated technology, and inadequate staffing. Communication gaps between school leaders, teachers, students, and parents can lead to misunderstandings, delays in decision-making, and a lack of engagement from stakeholders.

5.1.2 The management processes in schools

The findings in Table 4.7 showed poor management processes in selected secondary schools in Luwero District. For example, the responses for what are the management processes in school and staff work under guidance, influence and supervision was rated at a degree of 18.3% (116), followed by the school forecasts and anticipates risks for effective operations at a degree of 16.7% (106) and staff do the various roles assigned to them in the school at a

74

degree of 16.0% (n=101). Furthermore, the findings showed that other management processes in school with least percentages are 'the school tracks its revenue and expenses under the budget' at a degree of 13.7% (n=87); 'The school management track progress and trends that may need further investigations', 12.5% (n=79); 'The school has a well-developed Organization structure', 12.3% (n=78) and 'Different departments are well coordinated at a degree of 10.4% (n=66). Overall, the management processes was very poor as all the findings were < 50%. Hence the researcher attributed these as lack of e-record keeping to enhance the school management processes. Affirmatively, e-record keeping would enhance the management processes in schools by helping them track and keep their records for easy planning, staffing, monitoring and controlling of the school management processes.

Therefore, for proper adaptability of e-record keeping the school management should put in place various management processes like planning, organizing, staffing and controlling these activities for smooth running and equally accountability and accuracy in its implementation, monitoring and reporting procedures.

Baker et al. (2010) highlights the problems associated with using student test scores as a basis for evaluating teachers. The authors argue that such evaluations fail to take into account other factors that can affect student learning, such as poverty, language barriers, and school resources. The report recommends that evaluations should consider multiple measures of teacher effectiveness and be used as part of a broader system of school improvement.

Leithwood and Riehl (2005) provide a comprehensive overview of the research on effective school leadership. The authors argue that effective leaders must be able to create a shared vision, develop a supportive culture, and engage in ongoing professional development. They also emphasize the importance of developing strong relationships with stakeholders and using data to inform decision-making.

Robinson, Lloyd, and Rowe (2008) explore the impact of different types of school leadership on student outcomes. The authors argue that transformational leadership, which emphasizes a shared vision and high expectations, has the greatest impact on student learning outcomes. They also emphasize the importance of distributed leadership, which involves sharing leadership responsibilities with other members of the school community.

Planning is essential for school improvement efforts. According to the research conducted by Leithwood and Louis (2011), successful schools have a strong focus on planning and data-based decision-making. These schools prioritize long-term planning and use data to inform

their decision-making processes. By doing so, they are able to identify areas in need of improvement and develop strategies to address them.

Planning is also a critical component of curriculum development. According to the research conducted by Cheng and Yuen (2007), effective curriculum planning involves identifying learning goals, selecting appropriate instructional strategies, and designing assessments that align with those goals. By doing so, educators can ensure that the curriculum is relevant, engaging, and effective.

Strategic planning is an important aspect of school management processes. According to research conducted by McLeskey and Waldron (2011), strategic planning involves developing a vision for the school, setting clear goals, and identifying the resources needed to achieve those goals. By doing so, schools can create a roadmap for success and ensure that their efforts are aligned with their overarching mission and objectives.

According to Vernez and Krop (2011), resource planning is essential for schools to operate efficiently and effectively. School improvement planning is a process that involves identifying areas for improvement, setting goals, developing strategies, and monitoring progress. This process enables schools to continuously improve their programmes and services and respond to changing needs and priorities.

According to Allen (2014), time management is essential for school leaders to manage their workload effectively, make informed decisions, and lead change. Information management involves the collection, analysis, and use of data to support decision-making and improve organizational effectiveness. Effective information management ensures that data is collected accurately, analysed appropriately, and used to inform decision-making.

Staffing involves selecting, recruiting, and developing personnel to support the school's mission and goals. Effective staffing practices enable schools to attract and retain high-quality personnel and promote professional development. According to Glickman, Gordon, and Ross-Gordon (2014), staffing should be based on the school's needs and priorities and reflect best practices in personnel management.

Scheduling involves allocating time and resources to support the school's programmes and services. Effective scheduling practices enable schools to optimize the use of time and resources, reduce conflicts, and enhance student outcomes. According to Tomlinson (2014),

scheduling should be based on the needs of students and teachers and reflect the school's mission and goals.

Coordinating is a critical component of school management processes that involves integrating activities, aligning resources, and building relationships to achieve the schools' goals and objectives. Effective coordinating practices enable schools to optimize the use of resources, promote collaboration, and enhance student outcomes.

Resource allocation involves distributing resources to support the school's programmes and services. Effective resource allocation practices enable schools to align resources with the school's mission and goals and promote efficiency and effectiveness. According to Odden and Picus (2014), resource allocation should be based on a comprehensive understanding of the school's needs and priorities and reflect best practices in financial management.

Furthermore, effective communication can facilitate the development of positive relationships among stakeholders, which can improve trust and reduce conflicts (Leithwood &Riehl, 2003). Communication can be enhanced through various strategies, such as regular meetings, open-door policies, and the use of technology (Nketsia & Wiredu, 2015).

In addition, the work of Bryk et al. (2010) conforms to the study that another important aspect of coordinating school management processes is teamwork and collaboration. Collaboration involves the sharing of knowledge and skills among stakeholders to achieve common goals. Researchers have suggested that collaboration can improve the quality of teaching and learning and increase student achievement (Coburn &Penuel, 2016).

To crown it all, Nketsia and Wiredu (2015) construed that technology can also be used to support coordination in school management processes. Technology can facilitate communication, provide access to information, and support data-driven decision-making. For example, online platforms and social media can be used to share information and resources among stakeholders. Data management systems can provide teachers and administrators with timely and relevant information to inform instruction and decision-making (Marsh et al., 2005).

The researcher posits that management process is vital to keep the school alive and progress over time. If the management fails, then the fate of the school is left in limbo. Hence, e-record keeping helps to track, checkmate and store information, evaluations and way forward

of the school with ease. Integration of such an approach in the school management system is the way to go.

5.1.3 The relationship between e-record keeping and school management process

Objective three of the study sought to determine the relationship between e-record keeping and school management process in selected secondary schools in Luwero District. This summary is of a linear regression model that predicted an outcome variable based on four predictor variables: perceived usefulness, user-friendliness, social factors, and relative advantage. The model summary indicates that it has a multiple R (correlation coefficient) of 0.303, indicating a weak positive correlation between the predictors and the outcome variable. The R square value of 0.092 indicates that the predictors explain only 9.2% of the variation in the outcome variable. The adjusted R square value is 0.078, which is slightly lower than the R square value, indicating that the model may be slightly over-fitting the data. The standard error of the estimate is 0.37047, which indicates the typical difference between the predicted values and the actual values. The model, therefore, suggests that the four predictor variables have a weak relationship with the outcome variable and that there may be other important variables that are not included in the model.

The ANOVA table shows the analysis of variance results for the linear regression model, which tests whether the model's predictor variables significantly predict the outcome variable. The sum of squares for each source of variation is a measure of the amount of variation in the outcome variable that is explained by each source. In this case, the sum of squares for the regression term is 3.639, indicating that the predictor variables explain a significant amount of variation in the outcome variable. The degrees of freedom (df) for the regression term are 4, representing the number of predictor variables in the model. The mean square for the regression term is 0.91, indicating that the predictor variables explain an average of 0.91 units of variation in the outcome variable.

The F-test statistic for the regression term tests the null hypothesis that the regression term does not explain a significant amount of variation in the outcome variable. In this case, the F-test statistic is 6.629, indicating that the predictor variables significantly predict the outcome variable.

The Sig. represents the p-value for the F-test statistic, which indicates the probability of observing the F-test statistic or a more extreme value under the null hypothesis. In this case, the p-value is 0.000, which is less than the significance level of 0.05 and suggests that the

predictor variables (Perceived usefulness, User-friendliness, Social factors, Relative advantage) significantly predict the outcome variable.

In addition, to prove the relationship between e-record keeping and school management processes, Table 4.9 detailed that a chi-square test of significance 579.567/216=2.6831. Taking the square of $(2.6831)2 = 7.20$, indicates that there is 72.0% positive significant relationship between e-record keeping and school management processes of p<.05. (P < 0.000, φ=1.473). The count showed that 98% expected count was less than 5%. The minimum expected count was .01. The degree of impact as indicated by φ=1.473 implies that e-record keeping has a moderate effect on school management processes. The significant level of P<0.000 implies that school management processes depend on e-record keeping and these variables are not independent of each other. Therefore, it was confirmed that there was a significant relationship between e-record keeping and school management processes in the selected secondary schools in Luwero District.

In confirmation to the above findings, the results of Bakamane's study (2018) on electronic records management practices at the companies and intellectual property authority in Gaborone in Botswana revealed that 75.4% of the study respondents indicated there was limited realization of e-records management benefits. However, the few companies which had realized and implemented e-records management were doing better in terms of retrieving the necessary information. However, Bakamane's study was outside academia as was the case with this study.

Meanwhile, Nyampog (2015) studied electronic records management in national development. Basing on a desktop review of literature, findings revealed that electronic record management systems provide good results for achieving goals/objectives of an organization. This supposes that even secondary schools carrying out electronic records management are likely to improve on the achievement of school goals and objectives. However, this was a desktop review of literature while this study was empirically examined.

In addition, Mukred and Yusof (2014) investigated electronic records management and its importance for decision making process in Yemen higher professional education. Results revealed that e-record keeping was an effective tool for the management of schools. This information was recorded as being safely organized and kept with limited risks of distortion from external interference. Also, there is a clear and safe way of carrying of this information, unlike paper work which is not easy to manage. However, the above study was not in the

context of Uganda, and specifically secondary schools in Luwero District, where this study was carried out.

In contrast, Samuel and Nyarko (2014) revealed that ICT integrated systems of acquiring and storing data were used to make analysis and take decisions regarding human resource performance, and in so doing management was made more effective. Education record keeping practices vary substantially by size, institution, financial resource base and sophistication of their administrative practices (Aghuta, 2011). Furthermore, they assert that they also vary as students move along the continuum from pre-school towards post-graduate education because the role of educational institutions varies along the same continuum. He reveals that generally, school administrators tend to get more concerned about records emanating from higher school levels, that is from colleges and post-graduate institutes/ schools, than at secondary schools and below. The reason for this was unknown. As to what extent this was obtainable in Luwero District schools, have been uncovered by this study investigation.

Agheuta (2011) further observes that there seems to exist in a relationship between good records system in schools and the school administration. A related study carried out to establish the relationship between record management practice and decision-making in Nigerian universities revealed that 16.7% were not aware of the organized system of records management progrannme; 73.8% of the respondents also reported that the records are kept with various principle officers; while 57.9% indicated that there is abridged protocol for handling records in the various institutions. A sizable proportion (84.7%) of senate members indicated that they were not sure of the full ramifications of records management in their various institutions.

Irrevocably, Iyede (2011) construed that the purpose of e-record keeping and management in schools was to ensure that accurate and proper records of students' achievements and growth, information on school activities and matters that would promote efficiency and effectiveness of the school system were kept and maintained. The extent to which Luwero district secondary school record keeping systems impact on their administration were ascertained in this study.

Electronic record-keeping systems can be complex, and some people may have difficulty using them or may experience technical issues that can hinder their effectiveness. However, it is important for schools to address these concerns and perceptions by ensuring that they have

adequate security and privacy measures in place, providing staff with training and support to use electronic record-keeping systems effectively, and communicating the benefits of electronic record-keeping to all stakeholders. Here the researcher thinks that Electronic record-keeping allows schools to manage data more efficiently and accurately, making it easier to track and analyse student and staff information, as well as financial and administrative data. This, in turn, helps schools to make more informed decisions about resource allocation, staffing, and programme planning. Electronic record-keeping also allows for greater accessibility to information, as records can be easily accessed from anywhere with an internet connection. This means that teachers, staff, and administrators can access critical information quickly and easily, thus improving communication and collaboration within the school.

Some teachers may worry that electronic record-keeping systems are vulnerable to hacking and other security breaches, which could compromise sensitive student and staff information. The researcher also noted that, by contrast, some teachers may resist the implementation of electronic record-keeping systems because they are used to traditional paper-based systems or are uncomfortable with new technology. Some teachers may worry that the implementation of electronic record-keeping systems could lead to job loss, as some tasks may become automated. Implementing electronic record-keeping systems can require significant financial investment, which may be a concern for schools with limited budgets. However, the advantage is that when trained, your job is secure and you are more competent to protect your data, secure your job and as well remain updated and the ease of keeping information backed up electronically unlike manual records that can be easily tampered with and have no trace.

5.2 Conclusions

The study concludes that there is low level of e-record keeping usage in the school management processes. However, if properly adopted, this can improve the admission process, the storing of students' and teachers' bio-data, examination records, attendance, administrative data, and financial record keeping. All the aforementioned findings and discussions are relevant to the study objectives.

Furthermore, the study concludes that for accurate record keeping, data retrieval, and preservation of crucial school information for use now and in the future, the management process has to plan, coordinate, staff, control, monitor, and execute e-record keeping in the school management processes.

Additionally, it is vital to highlight that the study's conclusion indicated a strong correlation between e-record keeping and school administration processes. It was noticed that when schools implement electronic record keeping, they are able to produce records from their daily transactions, ensure that staff members handle records in the school in an appropriate manner, and also use a variety of ICT tools for record capturing and safeguarding important school documents. Regression analysis also concluded that e-record keeping predicts management processes in schools.

5.3 Recommendations of the Study

Based on the study's findings and conclusions, school management should promote e-record keeping in management procedures for efficient and effective record keeping.

The demand for staff training on using ICT tools to save and retrieve records is even greater. This would alleviate the difficulties associated with not using electronic record keeping in school administration procedures due to a shortage of qualified personnel and expertise.

In addition, since e-record keeping promotes and supports accountability, it is recommends that the schools adopt e-record keeping for better financial management, reporting documentation for reference purposes, and to help in school planning and decision-making. The study also recommends that there should be mandatory implementation of e-record keeping enhancing the adoption of ICT in school management processes.

5.4 Areas for further research

The researcher suggests that additional research be done to look more closely at the following:

The elements influencing how electronic record keeping is integrated into school management procedures.

In a comparable environment, a longitudinal study should be conducted to learn more about the level of e-record keeping usage in school financial management.

The advantages of electronic recordkeeping over traditional recordkeeping in school administration processes should be further investigated by scholars in the future.

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APPENDICES

APPENDIX I: LETTER REQUESTING TO FILL THE SURVEY QUESTIONNAIRES

Title: A self-administered questionnaire for teachers on e-record keeping uses in management process in selected secondary schools in Luwero District

<div style="text-align: right;">

Mugisha David
C/o Kabale University
P.O Box 317
Kabale, Uganda.
03/03/2022

</div>

Dear Sir/Madam/Sister/Rev

RE: REQUEST TO FILL THIS SURVEY QUESTIONNAIRE

Warm greetings to you,

You have been randomly selected to participate in the above titled survey leading to the award of a Master's Degree in Educational Management of Kabale University. As one of the teachers in secondary schools you are anticipated to be well conversant of how the e-record keeping uses relates with school management processes in your school.

It is on this account that, this instrument is with you. Please follow instructions provided at the beginning of each section to rate yourself on items that follow. Also you are requested to remember that the findings provided will be used for academic purposes and that they will be treated with utmost confidentiality.

Thank you.

Yours faithfully,

…………………………………..

Mugisha David

Researcher

APPENDIX II: QUESTIONNAIRE

Dear Respondent, I am Mugisha David a student at the Kabale University pursuing a Master's degree in Education management. I am conducting a research study titled:E-record keeping and school management processes in the selected secondary schools in Luwero District. Confidentiality on information provided will be maintained and privacy respected.

Code: …………………………..…………..

Designation: …………………………………..

SECTION A: RESPONDENTS BIODATA

In this section, you are requested to rate yourself on these statements by ticking the most appropriate alternative to you.

A1. Gender   : 1) Male   2) Female

A2 Age group   : 1) Below 30yrs   2) 30-39   3) 40-49   4) 50+

A3. Work experience   : 1) Less than 4 years   2) 5-9 years   3) 10+ years

A4. Management level: 1) Top level   2) Middle level   3) Junior staff

A5. Education level: 1) PHD   2) Masters   3) Bachelors   4) Diploma

SECTION B: E-RECORDS KEEPING USAGE IN SECONDARY SCHOOLS (IV)

In this section rate yourself on each of the following statements basing on scale where 1= strongly agree, 2= agree, 3= not sure, 4) disagree and 5= strongly disagree

SN	Question	1	2	3	4	5
B1	Admission of students are done electronically					
B2	Students' bio-data is electronically kept					
B3	Teachers bio-data is electronically kept					

B4	Teachers performance records are electronically kept
B5	Exam records in the school are electronically kept
B6	Attendance records of employees are electronically kept
B7	Some records kept in your school are related to financial transactions
B8	Some records kept electronically relate to administrative data

SECTION C: SCHOOL MANAGEMENT PROCESSES (DV)

In this section rate yourself on each of the following statements basing on scale where 1= strongly agree, 2= agree, 3= not sure, 4) disagree and 5= strongly disagree

SN	Question	1	2	3	4	5
C1	The school forecasts and anticipates risks for effective operations					
C2	Staff do the various roles assigned to them in the school					
C3	Different departments are well coordinated					
C4	The school has a well-developed Organization structure					
C5	The school management track progress and trends that may need further investigations					
C6	Staff work under guidance, influence and supervision					

C7	The school tracks its revenue and expenses under the budget

SECTION D: E–RECORDS KEPT IN SECONDARY SCHOOLS

In this section rate yourself on each of the following statements basing on scale where 1= strongly agree, 2= agree, 3= not sure, 4) disagree and 5= strongly disagree

SN	Question	1	2	3	4	5
D1	The records in this school are well kept electronically					
D2	This school has records that emulate from its daily transactions					
D3	The work you do involve creation or generation of records					
D4	The staff that handles record in the school is well qualified.					
D5	The school has a storage devices and backup devices for the past records					
D6	The school has computers and gadgets for record capturing					
D7	Your school keeps vital school documents for operations					
D8	All the electronic records kept in your school are valuable					

APPENDIX III: INTERVIEW GUIDE

Interview Guide for Administrators in selected Secondary Schools in Luwero District on e-record keeping and school management process in selected secondary schools in Luwero District

1) Do you carry out electronic record keeping?

2) Which types of records do you keep electronically?

3) What are the uses of e-record keeping?

4) Do you have qualified staff to perform e-record keeping?

5) What is the significance of e-record keeping over other modes of record management?

6) How is the management process in this school?

7) What challenges do you experience with e-records keeping?

8) What is the influence of electronic record keeping on schools management process?

APPENDIX IV: TABLE OF MORGAN AND KREJCIE (1970) FOR DETERMINING POPULATION SAMPLE SIZES IN EDUCATIONAL RESEARCH

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.   *S* is sample size.

Source: Krejcie & Morgan, 1970