

Awareness as Determinant of Use and Security of Electronic Records Management System among Administrative Staff of Public Polytechnics in Edo State, Nigeria

**Sudetu OSENI
LCU/PG/002978**

Being a MSc Thesis Submitted to the Department of Information Management, Faculty of Communication & Information Sciences, Lead City University, Ibadan, Oyo State, Nigeria

In Partial Fulfilment of the Requirements for the Award of Master of Science Degree (MSc) in Office and Information Management

2024

Certification

This is to certify that **Sudetu OSENI** with **Matriculation Number LCU/PG/002978** carried out this research work titled “Awareness as Determinant of Use and Security of Electronic Records Management System Among Administrative Staff of Public Polytechnics in Edo State” in the Department of Information Management, Faculty of Communication and Information Science, Lead City University, Ibadan, Oyo State, for the award of Master Degree (MSc) in Office and Information Management and that this has not been previously submitted.

Dr. Oluwabunmi D. Bakare-Fatungase
(Supervisor)

Date

Dr. Sophia V. Adeyeye
(Head of Department)

Date

Dedication

This work is dedicated to Almighty Allah, The Most Beneficent, and The Most Merciful.

Lead City University Ibadan DO NOT COPY

Acknowledgement

My appreciation goes to the management and staff of Lead City University, Ibadan for providing the needed support and conducive environment for learning during the course of my study and in conducting this research. I am also grateful to the management and staff of Auchu Polytechnic, Auchu and Edo State Polytechnic Usen, that provided data for this study as well as the services provided by staff of the Library in Lead City University, Ibadan, Oyo State.

I also use this privilege to acknowledge the immeasurable support and intellectual contribution of my able supervisor, Dr. Oluwabunmi D. Bakare-Fatungase, the Head of Department, Information Management; Dr. S. V. Adeyeye for her guidance, understanding and constructive criticism which have contributed to the quality and success of this work. To Prof. L. A. Abioye, the Dean of the Faculty of Communication and Information Science, Lead City University. To the Provost, College of Postgraduate Studies, Prof. Afolakemi Oredein and other members of staff of the Postgraduate College, Lead City University, I say thank you for providing a very conducive environment for learning and support during my programme in the University. I am grateful to all the lecturers of Information Management Department: Prof. E.A Erwat, Dr. T. E. Adenekan, Mr. P. B. Olusola, Dr. S. O. Tunmibi, Dr. K. Lateef, Dr. F. B. Oguntoye, Dr. O. O. Ajibare, Dr. K. O. Popoola, Dr. O.A. Ologbosere, Mr. I. A. Adeniran, Mr. M. E. Ogunwumiju, Mrs. R. O. Akinpelu, Mrs. V. O. Ahamze and Mr. A. A. Adeyemi, I say a big thank you. Thank you all for your various contributions to the success of this thesis.

I thank my darling husband, Mr. A. A. Abokhai and my lovely children, Abdul-Raheem, Hannet and Zinat for their support and prayers throughout the period of my study. I am also grateful to my brothers and sisters and other family members as well as my wonderful friends

and our course mates for their various contributions that added value to my work. May God bless you all. Ameen.

Even though the above-mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the error(s) if any, found in this work.

Lead City University Ibadan DO NOT COPY

Abstract

Institutions are increasingly transiting to digital records-keeping in contemporary times, therefore understanding the dynamics of awareness, use and security is crucial for effective administrative processes. This study investigated awareness as determinant of use and security of electronic records management system (ERMS) among administrative staff of public polytechnics in Edo State, Nigeria. The study was designed to examine the extent to which administrative staff adopt electronic records management system in Public Polytechnics in Edo State. Three research questions were raised and two null hypotheses were tested at 0.05 level of significance. The study adopted the descriptive survey design and total enumeration of the population of 245 administrative staff (190 and 55 respectively) in the Public Polytechnics in Edo State was used for the study. Adapted questionnaire was used to collect data for the study and reliability co-efficient for the construct was 0.916. Descriptive and inferential statistics were used to analyze the research questions and hypotheses. The hypotheses were tested using P-Values at 0.05 level of significance. The results of the findings of the study revealed the influence of awareness on use of ERMS ($AdjR^2 = 0.382$, $F(137.114) = 1.219$, $P = 0.000 < 0.05$); influence of awareness on security at ($AdjR^2 = 0.466$, $F(192.836) = 1.219$, $P = 0.000 < 0.05$). This means that there is significant influence of awareness on the use of electronic records management system among the administrative staff. Also, there is significant influence of awareness on the security of electronic records management system among the administrative staff. The study concluded that there is significant influence of awareness on the use and security of electronic records management system among administrative staff of public polytechnics in Edo State. It was recommended among others that professional workshops and seminars should be organized for the staff to enable them learn more on protection practices of ERMS for effective job performance in the polytechnics.

Keywords: ERMS, Awareness, Use and Security, Administrative Staff

Word Count: 298

Table of Contents

Content	Page
Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	vi
Table of Contents	vii
List of Tables	x
List of Figures	xi
List of Acronyms	xii
Chapter One: Introduction	
1.1 Background to the Study	1
1.2 Statement of the Problem	12
1.3 Aim and Objectives of the Study	13
1.4 Research Questions	14
1.5 Hypotheses	14
1.6 Significance of the Study	15
1.7 Scope of the Study	16
1.8 Limitations of the Study	17
1.9 Operational Definition of Terms	17
Endnotes	19

Chapter Two: Literature Review	21
2.1 Conceptual Review	22
2.1.1 Use of Electronic Records Management System	22
2.1.2 Security of Electronic Records Management System	38
2.1.3 Awareness of Electronic Records Management System	56
2.2 Theoretical Framework	66
2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)	67
2.2.2 The Information Security Model	73
2.2.3 Situation Awareness Theory	77
2.3 Review of Empirical Studies	79
2.3.1 Awareness of ERMS and Use of ERMS	79
2.3.2 Awareness of ERMS and Security of ERMS	83
2.4 Conceptual Model	85
2.5 Summary of Gaps in Literature Reviewed	86
Endnotes	90
Chapter Three: Methodology	
3.1 Research Design	108
3.2 Population of the Study	108
3.3 Sample and Sampling Techniques	109
3.4 Description of Research Instrument	109
3.5 Validity of Research Instruments	110
3.6 Reliability of the Instruments	110
3.7 Method of Data Collection	111
3.8 Method of Data Analysis	112

Endnotes	113
Chapter Four: Results and Discussion of Findings	
4.1 Demographic Data	114
4.2 Analysis of Research Questions	117
4.3 Presentation of Test of Hypotheses	126
4.4 Discussion of Findings	129
Endnotes	140
Chapter Five: Conclusion	
5.1 Summary of Findings	142
5.2 Conclusion	143
5.3 Recommendations	144
5.4 Contribution to Knowledge	145
5.5 Suggested Areas of Further Research	146
Bibliography	149
Appendices	169
Bio-data	183
The University Compliance Certification	186

List of Tables

Table	Title	Page
3.1	Population of the Study	104
3.2	Reliability Statistics	106
4.1	Demographic Characteristics of Respondents	110
4.2	Level of Use of ERMS by Administrative Staff	112
4.3	Level of Security of ERMS by Administrative Staff	115
4.4	Level of Awareness of ERMS by Administrative Staff	118
4.5	Regression Analysis Result of Influence of Awareness on the Use of Electronic Records Management System among Administrative Staff	122
4.6	Regression Analysis Result of Influence of Awareness on the Security of Electronic Records Management System among Administrative Staff	124

List of Figures

Figure	Title	Page
2.1	Unified Theory of Acceptance and Use of Technology	69
2.2	Information Security Model (CIA Triad)	73
2.3	Situation Awareness Theory (SAT) Framework	75
2.4	Conceptual Model	81

Lead City University Ibadan DO NOT COPY

List of Acronyms

Abbreviation	Meaning
ERMS	Electronic Records Management System
UTAUT	Unified Theory of Acceptance and Use of Technology
CIA	Confidentiality, Integrity and Availability
TAM	Technology Acceptance Model
CTAMTPB	Combined TAM and the Theory of Planned Behaviour
MM	Motivational Model
IDT	Innovation Diffusion Theory
SCT	Social Cognitive Theory
MPCU	Model of PC Utilization
TRA	Theory of Reasoned Action

Lead City University Ibadan DO NOT COPY

Chapter One

Introduction

1.1 Background to the Study

The advent of Information Technology (IT) in businesses, educational institutions, and government agencies has led to a massive surge in the volume of information, resulting in an unprecedented increase in records. Educational institutions, in particular, are significantly impacted by this exponential growth, as much of the information generated is directed towards businesses and government offices for administrative efficiency. This relentless increase in information volume has fundamentally altered how both public and private organizations conduct their operations. There have been notable shifts in the types of information being generated, stored, processed, and disseminated as organizational records. While technology has the potential to aid in the creation and management of information, its benefits are only fully realized when integrated with a clear understanding of records and information management principles. Without such understanding, the use of technology can lead to disorganized and inefficient processes, ultimately hindering the achievement of organizational goals and objectives. Effective management of information is thus essential to leverage the advantages of technology, ensuring that it supports rather than undermines organizational effectiveness. This requires a strategic approach to information management that considers both the technological tools available and the underlying principles of records management¹.

While there are many goals and advantages to records management, it is important to note that one of the main functions of records is their ability to serve as evidence of an event and an information container that makes the professional responsibilities of

administrative staff in any organization—especially in higher education institutions—obvious. Records are defined as information created, received, and maintained as evidence and as an asset by an organisation or person, in pursuit of legal obligations or in the transaction of business. Proper records management can help preserve this feature of records for organizational growth and development².

Everything pertaining to the control of records, from their creation to their eventual disposal, falls under the purview of records management. It deals with the creation, acknowledgment, preservation, utilisation, and eventual disposal of records. Managing records has to do with making sure that records are systematically managed throughout their lifecycle. Since records are the life and sole of any business organization, they should be efficiently and systematically controlled from their creation, reception, usage, protection as well as their disposition. Records management has to do with the way an organization systematically controls its records throughout the records' life cycle. This is necessary in order for business organizations to meet all the requirements for the successful operation of their businesses including the legal aspects as well as what the community expects of them⁶. In all business organizations, to be a good records manager means recognition of the significance of records and how to manage such records together with a good strategy on how to make sure that the records remain safe and also in a good format. This is necessary for the successful operation of any business³. For this reason, an organization needs to keep the necessary documents that will be accessible for both business operations and other matters. For the public sector, records management is crucial since it is a vital instrument for effective administration and sound company governance. Information from records helps with better planning and decision-making.

Records are frequently subject to particular legal obligations and serve as proof of government accountability and transparency. Records in government agencies provide as proof of conversations, choices, and deeds. During the process, a portion of the documents created by government officials will be kept in national and local archives⁴. Data protection and strong data governance are supported by effective records management. More extensive advantages include facilitating information access, ensuring that historical activity information is accessible, and facilitating the more efficient use of resources. A few outcomes of inadequate records management are ill-informed choices, inadequate information handling, and inefficiencies⁵. In contemporary times, there is a paradigm shift from the usage of the traditional records management practices in higher institutions of learning to embracing the principles and tenets of Electronic Records Management System (ERMS).

Electronic records management is the broadest term that refers to electronically managing records on varied formats, be they electronic, paper, microform, etc. It is very important for the success of and smooth running of the educational landscape. Simply said, a record is any document that pertains to a business transaction that needs to be recorded. This could include memos, reports, letters, and other documents that are available in both print and electronic format.. Within the higher institution of learning such as the polytechnics, records in relation to staff are the personnel records which includes job applications, resumes and hiring tests documents, offer letters, job description, performance reviews, compensation records, promotion documents, termination documents, employees' investigation records, disciplinary records, personal data (address, emergency contact), etc. These records are important documents that track employees' relationship with the polytechnic over

time. Students' records on the other hand, consist of students' academic records, students' admission/withdrawal letters, verification of results files, registration kits, students' matriculation lists, grades, transcripts, class lists, student course schedules, health records, students' financial information, students' disciplinary files, incoming and outgoing mails of students, etc. These records are kept both manually (paper form) and electronically within the polytechnic. Records in paper form may be physically saved in cabinets, boxes or other means while records in digital form may be saved using electronic storage devices or adopting cloud computing technologies³. Cloud computing is a modern information technology that allows for service delivery over the internet. Cloud computing as advancement in technology, allows the delivery of software, infrastructure and services over the Internet. It is the delivery of computing and storage capacity as a service to a group of end users. It is used to assist users in information retrieval, reporting management decision and storage of files. There is no need for maintenance of records with the use of cloud computing. It is a new technique of computing service offered over the Internet, which can be accessed irrespective of geographical location. It provides a shared pool of resources, including data storage space, network, computer processing power and specialized corporate and user applications^{6,7,8}.

Emerging technologies like cloud computing is not meant to be alien to administrative staff of higher institution of leaning knowing the fundamental role they play within the discourse of electronic records management system. Therefore, as many companies have records that are confidential so also within the educational space, there are sensitive data which may either make or mar a student's academic journey, a staff's career progression or the higher institution public image at large; more reason

there is the need for appropriate security protocols that are meant to be put in place for administrative staff to adhere to. ERMS improves the security of records. This is done by identifying and setting up security measures and protocols to ensure the safety of records. This also enhances the confidentiality, integrity and availability of the records thus mitigating risk, vulnerability or threat that may try to compromise data security. It is an acknowledged fact that administrative staff of polytechnics are exposed to private or confidential information in the course of carrying out their assigned duties. Private information is protected by legislation and illegitimate disclosure is illegal. Hence, the use of ERMS will ensure that such private or confidential information will be used only for the purpose of performing an assigned task by authorized users.

Many electronic records management systems are equipped with robust security protocols designed to safeguard sensitive documents. These protocols introduce a layer of accountability for administrative staff, ensuring that documents are managed properly. Records security encompasses the tools and processes organizations employ to protect their records. This involves implementing policy settings that prevent unauthorized individuals from accessing business or personal information. Ensuring the security of records protects them from unauthorized activities, such as inspection, modification, recording, and any form of disruption or destruction. The repercussions of security breaches can be severe, including the theft of private information, tampering with data, and the deletion of critical data. Security is a crucial element of a comprehensive records management plan, and arguably one of the most vital.

Effective records security supports good data governance practices and is also a legal requirement for data protection. Inadequate record security exposes systems and

services to significant risks, which can result in substantial harm and distress to individuals and the institutions they belong to. Therefore, maintaining robust records security is essential not only for legal compliance but also for protecting the integrity and reliability of an organization's information management system⁵.

Ensuring the implementation of appropriate security measures to protect critical institutional records from breaches should be a top priority for any employee responsible for records management security. If any aspect of these security measures fails, it can expose the institution to the risk of a data breach, which could lead to substantial fines, reputational damage, and potentially force the business into liquidation. Security threats in records management are multifaceted, ranging from malware and data breaches to physical threats such as theft, fire, or flood. This necessitates the incorporation of a diverse array of security measures within records management. Effective records management security involves safeguarding both paper and electronic information. There are three fundamental components of records management security. Protection from Physical Damage: Ensuring that records are shielded from physical threats such as fire, flood, and other environmental hazards. Protection from External Data Breaches: Implementing measures to prevent unauthorized access and cyber-attacks from external sources. Protection from Internal Theft or Fraud: Establishing protocols to guard against internal threats, such as theft or fraud by employees. Each of these components is critical to maintaining the integrity and security of institutional records, requiring a comprehensive and multi-layered approach to records management security^{9, 10, 11}.

The role of security protocols within the discourse of ERMS cannot be overemphasized. Within the Information Security Model (ISM), there is the The measures used for ERMS security in this study include confidentiality, integrity, and availability. In order to maintain continuity and efficiency in postsecondary institutions and to prevent violations of legal, regulatory, or contractual requirements, electronic documents must be appropriately protected. Security risks to public tertiary institutions, particularly polytechnics in Edo State, and their information systems come from a variety of sources, including as computer-assisted fraud, sabotage, theft, vandalism, fire, or flood. These days, computer viruses and hackers are among the most frequent and sophisticated security breaches, causing damage. They are more exposed to security risks and are therefore more vulnerable¹².

Security of the records should be a component of proper records management. Records pertaining to teaching and research (especially before publication), personnel and student personal information, records of the institution's operations, etc. are all considered to be secure. Generally speaking, more security is required if the loss, unauthorised access, or modification of the records could harm the institutions or prevent the administrative staff from carrying out their duties. Electronic records are especially susceptible to loss and alteration by mistake or without authorization. It is the duty of administrative personnel to take security into account when managing records during their workdays. Polytechnic records, whether in computerised or manual form, contain the data kept by the institutions detailing every facet of staff and student administration. It is a crucial instrument for managing the institutions' daily operations. It is required to conduct business both inside and outside of institutions.

It is impossible to minimise the contribution that information and communication technologies (ICTs) have made to bettering information management in general. The capacity of ICTs to gather, store, retrieve, analyse, and send vast amounts of data over diverse locations attests to this. The use of ICTs in records management has gained recognition for strengthening service delivery through a variety of innovative, custom-made applications and programmes, such as electronic records¹³, and for generally increasing the dependability and effectiveness of records. Because of the widespread use of ICT, records management has long since experienced a number of developments. As a result, jobs are being completed in organisations more effectively¹⁴.

The term Electronic Records Management System (ERMS) refers to a system that manages both electronic and non-electronic records using computers and their applications in accordance with accepted standards and functions¹. A computer programme called ERMS is made to keep track of and preserve records³. The method makes it possible to pinpoint precise modifications made to a record and determine the author of those changes. With control over record access and usage, ERMS speeds up information management, generation, and custody for specific purposes. Retention schedules for particular records and groups are applied by ERMS modules. At every level of the records management process, electronic records facilitate the capture, organisation, and efficient handling of records. All of the records produced by an organization's business processes can be captured by an ERMS³. The information and all the metadata connected to a specific record can be captured by a good ERMS. Since it aids in the creation, management, usage, storage, and disposal of records, an ERMS is referred to as an automated tool or software programme created to support an organization's workflow activities. Additionally, an organization's daily work can

be developed using this technology to improve the revision of electronic documents and offer documentation of its operations in the event of litigation¹⁵.

Threats to data and records management often originate from various directions, such as malware, cyber-attacks, data breaches and theft, fire burst, environmental uncertainty causing floods¹⁶. All such threats can badly expose data to damage for a lifetime. Therefore, public tertiary institutions especially public polytechnics in Edo State need to incorporate multiple layers of security in their records management infrastructure. Modern achievements of electronic records management systems like cloud storage and documents management system (DMS) software use a variety of security tools and techniques such as encryption and access controls to protect data. With security threats to data and the institutions' intellectual property, administrative staff in charge of records management need to recognize various forms of security threats coming from different locations. Recognizing the threats and implementing the right security measures as laid out above are important to protect the data from falling into wrong hands^{17, 18}.

Security of records is the preservation of confidentiality, integrity and accuracy of records. Confidentiality is the characteristic of data, information and information systems being disclosed only to authorized persons, entities and processes at authorized times and in the authorized manner. This means protecting records from unauthorized access and disclosure. Integrity is the characteristic of data, information and information systems being accurate and complete and the preservation of accuracy and completeness. This means safeguarding the authenticity, accuracy and completeness of records. Availability is the characteristic of data, information and information system being accessible and useable on a timely basis in the required

manner. This means ensuring that the records and associated services are available to authorized users when required⁵.

The actual use of technology is determined by behavioural intention. Users are expected to have the intention to use this system for successful implementation. The perceived likelihood of use of ERMS is dependent on the direct effect of three key construct. These include Frequency of use of ERMS, Purpose of use of ERMS and Specific time spent on each use of ERMS. Frequency of use of ERMS is the rate of use of ERMS by administrative staff of Public Polytechnics in Edo State as documented by the number of times per day, week, or month, as appropriate. Purpose of use of ERMS is the belief that the use of technology among administrative staff of Public Polytechnics in Edo State will attain goals in job performance. While Specific time spent on each use of ERMS is the exact time devoted to the use of ERMS by administrative staff of Public Polytechnics in Edo State. These metrics were adapted from literatures^{19,20, 21, 22, 23}.

In everyday office activity, awareness is the up-to-the-minute cognizance or what is required to move about, operate equipment or maintain a system. Awareness is the state or ability to perceive, to understand or to be conscious of events, objects or patterns²⁴. As earlier stated, awareness is the state or ability of administrative staff of Public Polytechnics in Edo State to perceive, understand or to be conscious of events, objects or patterns. Perception is the identification of the prevailing circumstances surrounding the need for the system among administrative staff of Public Polytechnics in Edo State; Comprehension is ability of administrative staff of Public Polytechnics in Edo State to understand the current situation; that is, understanding of the

prevailing circumstances that have been identified; while Projection is the projection of the current situation into the future in an attempt to predict the evolution of the tactical situation by administrative staff of Public Polytechnics in Edo State. The possessor of any knowledge must contain awareness and understanding of the knowledge in order to apply it well.

More broadly, it is the state or quality of being aware of something. The establishment of an electronic records management plan has been hampered by administrative staff members' ignorance of the use and security of the system. Polytechnic administrative staff members lack adequate knowledge and training about computerised records management. They have very little perception or comprehension of these ICT devices. They are unable to forecast these records' futures as a result. They don't understand the value and usefulness of electronic records management. This has resulted in inadequate integration of the fields of information technology (IT) and records management, as well as a lack of tools, training, and direction for all employees.

To guarantee that records management programmes may be implemented in businesses successfully and efficiently, policies, standards, and processes are essential. But despite the fact that information and record management is crucial to raising an organization's performance, accountability, and transparency, it received less attention.^{5,25} Most administrative staff of Public Polytechnic in Edo State are not aware of the usefulness or the value of electronic records management system and how it is contributing to the overall management of the institutions.

Knowing the relevance of electronic records management is a step forward to the achievement of the goals of records management generally. This lack of awareness of

the electronic records management system makes the use of these systems not realizable. Moreover, there is this problem of the system working at its full functionality during the time it is required to do so that is, the number of times the electronics records management gadgets are available for use. Worthy to be noted also is how well the gadgets have been available in the past and how well they will perform in the future for organizational effectiveness. Also, there should be guarantee of safety of the records management system generally. The records should be kept safe and away from prying eyes, from unauthorized usage, from theft and other harm or hazard that may come to the records. The measures adopted for Awareness of ERMS are Perception of ERMS, Comprehension of ERMS and Projection of ERMS all these are gotten from the Situation Awareness Theory (SAT).

Because polytechnics generate hundreds of records every day, a significant amount of paper records amass over time. This might make it harder to find certain records and result in not having enough room to store them all before they are thrown out. This turns into the main issue with paper recordkeeping. Establishing an electronic records management strategy has proven challenging due to administrative staff's ignorance. Employees lack adequate training and knowledge regarding electronic records management. This is a result of insufficient resources for efficient instruction. Consequently, they lack awareness regarding the significance and value of electronic records management. This has caused a shortage of space for the growing volume of documents kept by the institutions, concerns about the security of those records, and a lack of coordination between the use of information technology (IT) and records management. This has also made it more difficult to retrieve information from these organisations, as certain records are always hard to find—sometimes even impossible.

All of these irregularities could damage the institution's reputation. For instance, in 2018, there was a case of alleged forgery of result by a student of a Nigerian Polytechnic. On further enquiry, it was discovered that the student actually forged the result to enable him secure a job as the institution was unable to issue him his result due to the inability to retrieve his academic records (Federal Polytechnic, Offa, Kwara State). Hence, the need to investigate the influence of awareness on use and security of electronic records management system among administrative staff of Public Polytechnics in Edo State, Nigeria.

1.2 Statement of the Problem

Over the past few decades, there has been a fast increase in the administration and service delivery of tertiary institutions in the awareness and use of Information and Communications Technology (ICT) and its associated facilities. In most affluent nations, electronic records are quickly replacing paper-based records, and this trend is slowly creeping into emerging nations like Nigeria. The goal of the electronic records management system is to enhance the quality of instantaneous information retrieval in the industry while mitigating the drawbacks of the paper-based system. Regrettably, there appears to be a significant failure rate when it comes to the deployment of large-scale information technology initiatives like electronic records management systems. It is believed that developing nations like Nigeria have an even greater issue.

The researcher's preliminary investigation revealed that some Nigerian public tertiary institutions continue to employ the conventional record-keeping system. The biggest problems with this conventional record management system are safety and space constraints due to the growing amount of documents from educational institutions.

The physical space and security issues around the keeping of paper records have been issues that numerous organisations continue to face. Despite the fact that numerous studies on the application of ERMS worldwide have been conducted^{26, 27}. Studies on ERMS awareness, use, and security, however, appear to have gotten less attention. Thus, the purpose of this study is to ascertain how administrative workers at Public Polytechnics in Edo State perceive the use and security of electronic records management systems.

1.3 Aim and Objectives of the Study

The aim of this study was to investigate the influence of awareness on the use and security of electronic records management system among administrative staff of Public Polytechnics in Edo State. The specific objectives are to:

- i. identify the level of use (frequency of use of ERMS, purpose of use of ERMS, specific time spent on use of ERMS) of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria
- ii. identify the level of security (confidentiality, integrity and availability) of Electronic Records Management System(ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria
- iii. identify the level of awareness (perception, comprehension and projection) of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria
- iv. determine the influence of awareness on the Use of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria; and

- v. examine the influence of awareness on the Security of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria

1.4 Research Questions

The following questions are raised to guide the study:

1. What is the level of use (frequency of use of ERMS, purpose of use of ERMS, specific time spent on each use of ERMS) of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State, Nigeria?
2. What is the level of security (confidentiality, integrity and availability) of Electronic Records Management System (ERMS) in Public Polytechnics in Edo State, Nigeria?
3. What is the level of Electronic Records Management System (ERMS) awareness among administrative staff of Public Polytechnics in Edo State, Nigeria?

1.5 Hypotheses

The null hypotheses of this study were tested at 0.05 level of significance.

Ho1: There will be no significant influence of awareness on the use of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria

Ho2: There will be no significant influence of awareness on the security of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria

1.6 Significance of the Study

It is hoped that the findings of this study would be very significant to the following stakeholders:

The study would help management of the Public Polytechnics in Edo State in particular and other polytechnics in Nigeria in general in sensitizing the administrative staff on the importance of records management practices through the effective use and security of electronic records management system. The study would benefit the administrative staff of the Public Polytechnics in Edo State to appreciate the challenges associated with records management and how to address them with the effective use of electronic records management system.

It is anticipated that this study's conclusions will aid in raising awareness among the general public and students of the value of appropriate record keeping, particularly when using electronic record management systems. Additionally, the study will assist the National Board for Technical Education, a regulatory agency, in identifying the necessity of good records management for the Public Polytechnics in Edo State to be planned effectively in order to guarantee their quick growth and development. Additionally, the study would support efficient policy and regulatory formulation by rapidly and accurately supplying data.

Lastly, it would add to the body of knowledge in the area of electronic records management system of tertiary institutions generally. This would be of immense help to researchers in this field or similar field of study.

1.7 Scope of the Study

This study focused on investigating the influence of awareness on the use and security of electronic records management system among administrative staff of Public Polytechnics in Edo State. Geographically, the study covered Auchi Polytechnic, Auchi and Edo State Polytechnic, Usen. The population of the study comprised all the administrative staff in both institutions. The administrative staff who are all the registry staff in the institutions are targeted because they are actually the staff in charge of records management in the two institutions. In terms of variable scope, the study covered one independent variable and two dependent variables. The independent variable is: awareness of Electronic Records Management System (measured by perception, comprehension and projection). The dependent variables are: use of Electronic Records Management System (measured by frequency of use of ERMS, purpose of use of ERMS and specific time spent on the use of ERMS) and security of Electronic Records Management System (measured by confidentiality, integrity and availability). These sub-metrics are obtained from the Situation Awareness Theory, Information Security Model and literatures.

1.8 Limitation of the Study

Varied constraints were encountered by the researcher in the course of carrying out this thesis. One of such constraints which happened to be the major one was the uncooperative nature of the respondents as regards the issue of filling and retrieving information from the respondents. They were reluctant in accepting the questionnaire and also displayed ingenuity in the filling of the questionnaire. Other factors that limited this study are unlimited time for the retrieval which was supposed to last for

one week and analyses of data in addition to the financial difficulty of carrying out this study. However, the quality of this work is ascertained as these constraints have not affected the originality in any way.

1.9 Operational Definition of Terms

Use of Electronic Records Management System (ERMS): This is the actual use of technology by administrative staff of Public Polytechnics in Edo State,

Frequency of ERMS Use: This is the rate of use of ERMS by administrative staff of Public Polytechnics in Edo State.

Purpose of ERMS Use: This is the belief that the use of technology among will improve the job performance of administrative staff of Public Polytechnics in Edo State

Specific Time Spent on each Use of ERMS: This is the exact time devoted to the use of ERMS by administrative staff of Public Polytechnics in Edo State.

Security of Electronic Records Management System: This is the safeguarding or protection of records against all harms or danger by administrative staff of Public Polytechnics in Edo State.

Confidentiality: This is often associated with secrecy and the use of encryption on the available records by administrative staff of Public Polytechnics in Edo State.

Integrity: This refers to the certainty of administrative staff of Public Polytechnics in Edo State that the data is not tampered with or degraded during or after submission.

Availability: This means that the records is available to authorized users (administrative staff of Public Polytechnics in Edo State) when it is needed.

Awareness of Electronic Records Management System: This is the state or ability of administrative staff of Public Polytechnics in Edo State to perceive, understand or to be conscious of events, objects or patterns.

Perception of ERMS: This is the identification of the prevailing circumstances surrounding the need for ERMS among administrative staff of Public Polytechnics in Edo State.

Comprehension of ERMS: This is ability of administrative staff of Public Polytechnics in Edo State to understand the current situation prevailing circumstances of ERMS

Projection of Future ERMS Status: This is the projection of the current ERMS situation into the future in an attempt to predict the evolution of the tactical situation by administrative staff of Public Polytechnics in Edo State.

Electronic Records Management System (ERMS):This is an electronic system or process(managedby administrative staff of Public Polytechnics in Edo State, with the aid of computers and software)implemented in order to managedifferentkinds of records in an institution.

Endnotes

1. J., Ashantti. *The Record in the Information Age: A Progress Report on Reflection and Research*, Records & Retrieval Report, 12(1), 2019, 1–16.
2. U., Popoola. *Organization and Management of Records in the Public Sector*, 2nd ed. London: Longman, 2020.
3. I., Lyman. *Managing Records in the Modern Office: Taming the Wild Frontier*, **Archivaria**, 39, 2019, 70-79.
4. M., Fletcher. *An Introduction to Information Risk*, The National Archives, 2016.
5. C., Joshi, & U. K., Singh. *Information Security Risks Management Framework – A Step Towards Mitigating Security Risks in University Network*, **Journal of Information Security and Applications**, 35, 2017, 128-137. doi:10.1016/j.jisa.2017.06.006. ISSN 2214-2126.
6. N. Okuonghae, & O. D. Bakare-Fatungase. *Cloud Computing: A Tool for Effective Records and Information Management System in Nigerian Academic Libraries*. **Folia Toruniensia**, 23, 2023, 35-52.
7. A. O. Solomon, & O. Bakare. *Application of Cloud Computing to Library Processes: The Nigerian Perspective*. **Journal of Research in Humanities and Social Science**, 10(7), 2022 1-7.
8. K. O. Irenoa, R. I. Tijani, & O. Bakare. *Enhancing Library Services Delivery in the 21st Century in Africa: The Role of Cloud Technologies*. **International Journal of Library and Information Science Studies**, 4(4), 2018, 1-9.
9. A. O., Oyedokun. *Records and Information Management Awareness Foundation (RIMA)*, 2019. Available at <http://president@rimaw.org>
10. C., Bhana. *The Changing Organization and Management of Local Government*, Ibadan: Macmillan Publishers, 2018.
11. S., Johnston, & M., Bowen. *The Benefits of Electronic Records Management Systems: A General Review of Published and some Unpublished Cases*, **Records Management Journal**, 15(3), 2015, 131-140.
12. D. O., Ahmed. *The Principle of Provenance and the Concept of Records Creator and Record: Legal Development*, In the Principle of Provenance, Stockholm: Swedish National Archives, 2020, 33 - 49.
13. L., Abdullah. *Records & Information Management (RIM) - ARMA International*, 2017. www.arma.org

14. A., Yusuf. *The Role of Records Management in Promoting Human Rights, Good Governance and Accountability*, 2019. [Online] Available from: <http://www.baobabconnections.org/article/>
15. U., Alex. *Electronic Information Media and Records Management Methods: A Survey of Practices in United Nations Organizations*, **Information Society**, 9(2), 2017, 125–44.
16. G.,Tusubira, & E.,Mulira. *Supporting University ICT Developments: The Makerere University Experience*, 2021.<http://www.codesria.org>
17. D, O., BAKARE-FATUNGASE & S. OSENI, *Use of Electronic Records Management System on Administrative Staff Performance in Public Polytechnics, Edo State, Nigeria*. **Lead City International Journal of Library, Information & Communication Sciences**, 1(2), 2024, 224-243.
18. K., Umi, & I. P., Zawiyah,*Managing Records-related Risks*, 2019. [Online] Available from <http://www.findarticles.com>
19. A. G., Rick, *Electronic Information Media and Records Management Methods: A Survey of Practices in United Nations Organizations*, **Information Society**, 9(2), 2016, 125–44.
20. M., Ersoy, & O. Kavaklioglu, *Attitudes of Turkish Secondary School Teachers Towards Technology*.**Research in Pedagogy**, 10(2), 2020, 324-337.
21. R., Junco. *Comparing Actual and Self-reported Measures of Facebook Use*, **Computers in Human Behavior**, 29(3), 2020, 626–631.
22. P., Thompson. *The Digital Natives as Learners: Technology use Patterns and Approaches to learning*, **Computers and Education**, 65, 2019, 12–33.
23. A., Lepp, J. E., Barkley, A. C., Karpinski, & S. Singh, *College Students' Multitasking Behavior in Online versus face-to-face courses*. Sage Open, 9(1), 2019, 2158244018824505.
24. S., Banbury, & S., Tremblay. *A Cognitive Approach to Situation Awareness: Theory and Application*,Aldershot, UK: Ashgate Publishing, 2020, 317–341.
25. V., Venkatesh, M. G., Morris, G. B.,Davis, & F. D., Davis. *User Acceptance of Information Technology: Toward a Unified View*, **MIS Quarterly**, 27(3), 2003, 425–478. doi:10.2307/30036540. JSTOR 30036540. S2CID 14435677.
26. W., Pan.*The Implementation of Electronic Recordkeeping Systems: An Exploratory Study of Socio-technical Issues*, **Records Management Journal**, 27(1), 2017, 84-98.
27. C. M., Ambira, H. M., Kemoni, & P., Ngulube. *A Framework for Electronic Records Management in Support of E-government in Kenya*, **Records Management Journal**, 29(3), 2019, 305-319.

Chapter Two

Literature Review

This chapter reviews the literature relevant to this study. The theories relevant to the study area are also reviewed. The chapter dwells on the concept and empirical studies that discuss the connection between Awareness, Use and Security of Electronic Records Management System among Administrative Staff of Public Polytechnics in Edo State. This chapter is organized as follows:

2.1 Conceptual Review

2.1.1 Use of Electronic Records Management System (ERMS)

2.1.2 Security of Electronic Records Management System (ERMS)

2.1.3 Awareness of Electronic Records Management System (ERMS)

2.2 Theoretical Framework

2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

2.2.2 The Information Security Model

2.2.3 Situation Awareness Theory (SAT)

2.3 Review of Empirical Studies

2.3.1 Awareness and Use of Electronic Records Management System

2.3.2 Awareness and Security of Electronic Records Management System

2.4 Conceptual Model

2.5 Summary of Gaps in Literature Reviewed

Endnotes

2.1 Conceptual Review

2.1.1 Use of Electronic Records Management System (ERMS)

Much organizational activities leads naturally to the creation of records, but few organizations seek to record everything that they do. While oral communication generally leaves no trace until a written note is taken, manual and physical tasks might also go unrecorded. Written communication creates records. New technology and methods of working, however, frequently make it easier to produce records where none previously existed. Accounts of facts, events, and situations are typically kept in physical form as genuine proof for future reference and are created as records. Without operational records, no organisation can thrive in the current business climate, which is marked by high risk, denial, and an increase in crime. Records are employed to augment human memory and serve as the corporate memory of the organisation that generated them¹.

Records are written documentation of the things we do on a daily basis. They can be created, received, kept, and utilised by a public or private organisation or an individual, either in compliance with legal requirements or as part of a business transaction where they serve as evidence or form part of the record. It is a documented record of events and official facts that were recorded in writing at the time they happened, kept or conserved in writing as genuine proof, documented for future use, and saved for use in writing or in other formats, such as on a disc or other electronic medium. It can also be compared to a history book that includes details about historical and contemporary events that would be mentioned by². One of the main elements that strengthens the provision of high-quality services in educational institutions, such as polytechnics in Edo State, is the production and use of records at

these establishments. Planning and management policies that are effective are the result of timely and accurate information. This enhances a nation's general records management, which is essential for the institutions' overall development and progress in managing and enhancing the provision of high-quality services. A record has to be related to an activity carried out by an organization or an individual, and “this activity and the function it supports determine the provenance of the record, that is, the record is evidence of that activity”¹. Records serve as essential proof of the business that was conducted and should remain unaltered over time for as long as they are needed. As evidence of official business, records have an on-going use as a means of management, accountability, operational continuity, legal evidence and disaster recovery.

From the forgoing, it can be deduced that recorded information have undergone series of changes in the ways they are contained and even how they are produced from one human civilization to another, dating from the time of the papyrus, clay tablets, skin and paper down to the present age of electronically generated records using Information and Communication Technologies (ICTs). A record is not defined by its physical format or storage medium, its age, or the fact that it has been set aside for preservation, nor is it simply a form of recorded information. The essential characteristic of a record is that it provides evidence of some specific activities. Historically, records were manually written by organisational staff members using a typewriter, pen, and ink. The majority of records in the modern world are produced through computer programme interaction and digital technologies. Record managers refer to documents that are kept digitally as electronic records, sometimes called as digital records. Unlike records made using word processing or other software and

subsequently printed on paper, these terms particularly relate to records created or received electronically that are then maintained electronically². Electronic records are evidence of organizational activities and are generally the computerized versions of traditional paper records. Sources of electronic records range from Desktop Publications such as Word, Excel, PowerPoint, Access, Outlook, and email, to corporate databases etc.

Information stored on electronic media that is easily accessible for access and alteration is referred to as an electronic record. A computer programme called an Electronic Records Management System, or ERMS, is intended to store and monitor the movement of records³. The method makes it possible to pinpoint precise modifications made to a record and determine the author of those changes. With control over record access and usage, ERMS speeds up information management, generation, and custody for specific purposes. Additionally, ERMS modules apply retention periods for particular records and groups of records. At every level of the records management process, electronic records facilitate the capture, organisation, and efficient handling of records³. All of the records produced by an organization's business processes can be captured by an ERMS. Because it facilitates the creation, management, usage, preservation, and disposal of records inside an organisation, an ERMS is sometimes referred to as an automated tool or software application. This method can also be used to improve the editing of electronic documents and to build an organization's everyday operations so that it can be used as proof of its actions in court. An effective ERMS may record the data along with all the metadata connected to a specific record⁴.

Following the capture of a record, the ERMS can correctly identify and categorise it in accordance with the organization's preferred categorization scheme. Records that are tangible and those that are electronic have distinct information linked to them. For electronic records to possess the attributes that are expected of records, such validity and dependability, a greater amount of information is needed⁵. Systems for managing electronic records preserve their structure, content, and context, making them easier to retrieve and improving their qualities as records. Records must be kept up to date to guarantee they possess the fundamental qualities of records, including validity, dependability, integrity, and utility⁶.

Word-processed documents, spreadsheets, multimedia presentations, emails, webpages, and online transactions are examples of electronic records, or digital records⁷. Throughout the organisation, electronic records are stored in a variety of platforms, such as shared folders, hard drives, databases, and business information systems. Informational or data files created and saved digitally using computers and application software are known as electronic records. They are products of computers and computer software, and they are kept on different magnetic and optical storage systems. An electronic document's format does not alter that it is a record; yet, because of its electronic nature and reliance on machines for generation and reference, it requires different handling and storage procedures.. Electronic records are also considered to include all components of an electronic information system, namely: electronic media as well as all related items such as input documents, programmes and metadata (background and technical information regarding the information stored electronically).

Records Management is simply the process by which an organization controls all the elements of records, whether externally or internally generated and in any format or media type all the way through to their disposal. Records management is viewed as a process of controlling organizational information from creation through to its final disposition. Records provide part of the corporate memory of the polytechnic and give awareness and understanding to its history and procedures. As polytechnics carry out their mission, they create various records. The core business of a polytechnic is learning, teaching, research and community development; therefore, they are expected to be committed to academic excellence, innovation in research and critical engagement with society. Carrying out these activities produces records, which provide evidence that the Polytechnics are carrying out their statutory functions. If such records are not properly managed, then valuable evidence would be lost forever.

Good record keeping is critical for the efficient operation of an organization⁸. Knowing what records to create, and the information that they must contain, ensuring that they are created consistently and to a high standard; capturing records in record-keeping systems, maintaining records appropriately, and ensuring the accessibility and retrievability of records offer great benefits. Staff in registries tends to spend most of their time looking for records, which constitute the major source of information⁹. Emerging digital technologies including robotics, cloud computing, artificial intelligence, and big data are driving the adoption of new technology in businesses. Another factor is the expansion of the e-commerce sector. Information and communications technology (ICT) advancements have fundamentally altered how businesses operate¹⁰.

The use of technology in the workplace has revolutionised intra- and interorganizational communication and expedited company procedures to guarantee advantages including increased output, worker well-being, and customer happiness. Companies invest a lot of money on technologies to get these kinds of benefits¹¹. However, there is no guarantee of a successful deployment of ICT, and investments in this area frequently provide minimal returns.^{12, 13}.

According to market research findings, organisations have a less than 30% success rate when it comes to implementing new technologies that are intended to boost performance and yield a return on investment. If you take into account the organisations who were able to increase performance but were unable to maintain those gains over time, the number becomes less hopeful¹⁴. The technology utilization-acceptance gap continues to be one of the principal research topics in the IS literature because of the effects that technology adoption has on an organization's performance and cost-revenue structure.

The integration of ICT in the performance of functions at the organizational level is necessary for increased efficiency, competitiveness and cost effectiveness¹³. On the other hand, ICT which is computer-based technology has to do with the processing, storage and distribution of data. It refers to technology used for collecting and processing various forms of information¹⁴. The adoption of technology has changed the management of records in organizations. Most organizations in today's world now use ICT in their businesses. This is necessary so as to cope with the increase in the volume of information the organizations generate³.

Any information stored in a format that can be read by a machine qualifies as an electronic record¹⁵. Electronic spreadsheets, word processing files, databases,

electronic mail, instant messages, scanned images, digital photographs, and multimedia files are examples of electronic records. Numerical, graphic, audio, video, and textual information that is recorded or transmitted in analogue or digital form is also included in electronic records. In a similar vein, machine-readable records are known as electronic records. Any combination of text, data, graphics, photographs, video, audio, e-mail, internet content, documents, spreadsheets, databases, and other digital content can be created, maintained, modified, or sent by a computer or linked system. Electronic records facilitate more efficient information sharing, facilitate access to previously inaccessible content in paper form, and support the flow of knowledge throughout knowledge networks. By offering trustworthy proof of previous deeds and decisions, they aid in the development of evidence-based policy, but in order to do so, they must be handled with integrity and authenticity. A record that is easily accessible or modifiable on electronic storage media is called an electronic record. A machine-readable record is a term frequently used to describe an electronic record. This type of document contains coded and digitalized information that needs to be translated by a computer or other type of equipment.

Electronic records contain particular characteristics, such as the context, the structure, and the intellectual content of the document¹⁶. The appearance, organisation, or format of the document's content, as well as its context—which includes background information that clarifies the document's meaning—represent a second characteristic. Because single electronic versions can be reused, electronic record-keeping eliminates the need to print paper documents and saves money on paper, printer ink, and toner. Staff productivity is increased by electronic records because fewer time is spent looking for papers or locating the most recent version. Records are also quite useful.

Having thorough records from the start can help you save money and time. Records are seen as a crucial instrument for ensuring that an organisation fulfils its responsibilities. They are also helpful for management choices and references. Additionally, accurate records will ensure that the withdrawal time has been fulfilled, preventing unnecessary residues¹⁷.

A records management system that helps administrative staff with day-to-day tasks involving data organisation, account integration, and recordkeeping is called an Electronic Records Management System (ERMS). An organisation can manage user data regarding the state of their records by using an ERMS software programme¹⁸. With ERMS, management can access user records and spend less time on administrative activities. Additionally, it uses an ID number to process and generate statements that automatically display the status of the records. Moreover, electronic records management systems (ERMS) are systems designed for electronic records custody, archiving, storing, and integrating records management functions¹⁹. Moreover, ERMS features the ability to collect, process, store, distribute, maintain, and destroy electronic documents^{5,20}.

A system for managing both electronic and non-electronic records using computers and their applications in accordance with accepted practices and principles is known as an electronic records management system (ERMS)²¹. Additionally, ERMS was regarded as an electronic record management system. Since it aids in the creation, management, usage, storage, and disposal of records, an ERMS is referred to as an automated tool or software programme created to support an organization's workflow activities. This method can also be used to improve the editing of electronic

documents and to build an organization's everyday operations so that it can be used as proof of its actions in court.

Businesses create a lot of electronic records because they rely so much on information and communications technology (ICT) to run their operations. These documents are essential to an organization's success because they contain knowledge that can be used to solve problems and make decisions. As a result, it is important to have these records on file to show what has been done²². In order to prevent issues for organisations participating in legal proceedings and to lower the risk of fraud and corruption related to the administration of the information created, these records should be kept methodically and properly.^{23,24}.

Some organisations struggle with keeping electronic documents due to a lack of set policies and insufficient assistance from knowledgeable, experienced staff members²⁵. Using an electronic system is one approach to solving the issue; an electronic records management system (ERMS) ¹⁹ is a reliable example of one that is now in use. An ERMS is a system that enables businesses to provide records created with information a specific life cycle. Instead of managing analogue and paper-based records, it may capture, receive, use, manage, maintain, and dispose of electronic records²⁶. Maintaining records is done so that, when needed, proof of business activities may be produced. This is accomplished by applying security controls to guarantee the authenticity and integrity of the records, capturing contextual information (metadata) about the records being created, linking records related to the same business activity, and imposing disposal requirements on the records stored within the system^{27,28}. Records managers and information technology (IT) specialists must collaborate to link an ERMS with other information content

applications in order for the system to operate effectively inside an organisation. Records that are imported from various sources inside the initiative are accepted and managed by an ERMS. Typically, an electronic documents management system (EDMS) and an ERMS can be combined to offer a completely integrated solution²⁶.

An ERMS supports management decisions by documenting and retrieving the records of an organization and increasing the automation of business processes^{22, 29,30,31}. Classifying, locating, and identifying records that are about to be disposed of are the main management tasks performed by an ERMS. Furthermore, because an ERMS has characteristics for the electronic recording of information, including its description, management, storage, and distribution, it adheres to the principles of records management^{26, 31}. An ERMS also has the retention and disposal schedule included. With an ERMS, you can better retrieve electronic records and dispose of them according to established guidelines by keeping them stored in one place. To take advantage of automated workflows, several ERMSs on the market can be integrated with workflow modules⁵. While EDMS developed from software intended to create concordances and later became automated methods for managing hybrid collections of essentially identical sorts of documents, such as procedure manuals, ERMS originated from early automated ways for keeping hard-copy data^{22,28}.

Computer technology is used on a daily basis today. It is used by organisations to enhance productivity, performance, and portability, all of which facilitate the flow of information. Every organisation needs a reliable and well-organized information system in order to enhance the quality of services rendered, the decision-making process, and the achievement of targets in the competitive market of today. This is

because of the rapid advancements in technology and the need to shorten the product life cycle³³. The amount of information on electronic media is currently growing tremendously, and contemporary technology is drastically changing how individuals, institutions, governments, and businesses conduct business. As a result, the type of records and archives that are being created is changing.

A growing number of electronic records are being created as a result of the growing usage of computers and other ICT infrastructures, as well as ongoing office automation and digitization initiatives^{34,35,36}. The techniques of record management have undergone substantial modifications as a result of the usage of information technology (IT). It seems really amazing now that it's possible to manage massive document volumes without using IT in the past. But the incredible growth in information available has unavoidably brought about cutting-edge advancements in IT, and today, maintaining records and information effectively is crucial to preventing issues that could lead to operational failure.

In the process of creating the Technology Acceptance Model, the notion of perceived ease of use was proposed. This was related to having platforms that, when used, require no effort. The technology system must be simple to use and have minimal obstacles when used by authorised employees of the company. In order to avoid fostering a negative attitude towards persons involved in record administration, the interface must be devoid of errors or minimal correspondence³⁷. To guarantee that there are no gaps in the system and to aim for greater responsibility of the records within an organization's management, effective records management procedures are crucial³⁸.

It appears that organisational malpractices like data fraud and unauthorised record access can seriously hinder an organization's ability to grow and provide services. This negates the legitimate correspondence between the relevant record and the rights of the corresponding person or organisation. Cases of system failure, public mistrust, and subpar service performance are frequently linked to such malpractices in any organisation when they are misappropriated. The effect has a knock-on effect on individuals who are legally entitled to the information as well as the functioning of the organisation³⁹.

Reliability, authenticity, and accurate record management are essential components of any organization's use of ERMS, and they must be integrated in a way that makes system audit validation possible. This makes it possible for the central authority to determine the exact time and location of the modifications, and it also shows that the individuals in charge verified the data appropriately before disclosing it⁴⁰. The systemization of records according to their creation date, place of creation, and content to facilitate employee access to accurate information through a procedural approach are important markers of proper record management. Records must be stored in various models and in settings with stringent security procedures to avoid compromise. In cloud computing, virtual storage is also necessary to protect data from physical disasters like fire³⁸. More significantly, studies on the usage of electronic records management systems (ERMS) in the education sector reveal that new technology acceptance in general and ERMS adoption in particular are still in their infancy⁴¹.

The complete set of electronic information system components—that is, electronic media and related materials including input documents, printouts, programmes, metadata, background, and technical data that are all electronically stored—are collectively referred to as electronic records³¹. Electronic records are comparable to paper records in theory, with the exception of the media that was used during their creation, storage, upkeep, management, disposal, or preservation. The two kinds of records can differ significantly thanks to this medium. Content, context, structure, and fixity are all present in both types, but each is maintained differently (on paper or on electronic devices). There are typical questions about how different record kinds differ from one another. Electronic records are preserved differently than paper records, which are kept in ledgers, personnel files, letters, or articles. As a result, the structure of electronic records has greater complexity.

An item or document outlining the components of an electronic record and their relationships with one another is necessary for its structure⁴². The format allows for the construction of supported sub-documents, hyperlinks to connected sub-documents, and sections containing web pages that may include spreadsheets with embedded executable fields, functions, and macros, as well as computer languages like JavaScript and ASP for browser functionality. Generally speaking, electronic records are more varied than paper records since they contain records created with word processing and other software (such as tables, databases, photos, voices, and other user attributes). Furthermore, compared to their paper equivalents, electronic records are simpler to edit and require less work to transfer through an electronic system.

As a result, certain electronic records are now redundant, and their integrity, validity, and dependability have all been called into question. Although metadata (such as the author's name, the document creation date, and the last access date) is stored in electronic systems and is not affixed to hard copies of the documents themselves, the metadata is integrated into the system. As a result, it can be difficult to detect changes to the metadata, making it difficult to maintain the accuracy of electronic records—especially for non-IT professionals.

Because of their importance, electronic records must be managed effectively using an e-records management procedure. Similarly, the requirement to have qualified staff with the necessary abilities in ICT and e-records management software has arisen from the ubiquity of e-records emerging from everyday activities in many organisations. In addition to relying on ICTs for generation, e-records management also depends on them for efficient administration that enables simple access and retrieval.

An electronic management process takes into consideration the steps for e-records appraisal - this an important aspect in the records management process as it is expected to determine both the primary and secondary value of records, its relevance and the probable need for its continuous existence in the organization's database. Appraisal is followed by e-records accessioning and description which collects and describe the e-records based on their metadata; e-records management process also create room for e-records preservation and conservation as well as the best media for its storage; the process completes by ensuring adequate access to the records as well as provision for archiving or destruction.

E-records management therefore is the process that takes into consideration the possibility of ensuring that e-records remains useful and accessible for over a long period of time through certain prescribed steps or process as described in the organization's policy framework for the management electronic records. Despite the importance of records and the need for their effective management, a number of Polytechnics are yet to realize the need to enforce the necessary guidelines required for the effective management of its electronic records; a scholar confirmed that tertiary institutions in Africa seem to be forgetting that records are their corporate asset⁴³. They are important sources of administrative, evidential, and historical information, and are vital to the Polytechnic in its current and future operations.

In order for an institution of higher learning to take advantage of the benefits associated with ERMS, staff must know how to use it properly. Records are difficult to manage if the organization does not have policies and frameworks in place to handle the management of their records. Policies and frameworks act as a roadmap when implementing records management procedures¹⁹. Modern institutions of higher learning would benefit greatly from making governance, audits, and risk management a priority. This means that ERMS must ensure that these institutions can keep and maintain good records, and thus achieve their governance goals, while preserving their history, instilling trust, enhance their competitiveness, meet fiduciary requirements, and demonstrate transparency and accountability. Effective recordkeeping is a fundamental component of good governance.

There are many benefits associated with the use of new technologies in managing electronic records, they include, widespread access, flexibility, efficiency and

effectiveness, economic benefits, general business opportunities, and auditing capabilities for regulatory compliance. Electronic records can be shared widely and can be assessed and used by several people from different places at the same time. In paper environment, records are created, received and filed in one office, and they accumulate in one place. Electronic records can be stored remotely or on compact disc (CDs) or tapes, allowing people to share records and using their resources more dynamically.

Organisations that support active services that generate a lot of digital information and records to improve everyday operations and effectiveness are said to benefit from the electronic records management system (ERMS), which is considered new technology^{44, 45}. An organisation can enhance its operations by using ERMS, a solution that helps create and safeguard electronic records that include data and full service management. An automated instrument called an ERMS aids in the production, management, usage, storage, and disposal of records for an organisation. Additionally, this programme can enhance the capacity to create daily tasks to monitor day-to-day operations and edit electronic documents. Any company can maintain all of its electronic records in one place with an ERMS, which also helps to boost efficiency by giving management tools to better organise their workflow. Among the many file types that ERMS can handle are emails, word processing documents, spreadsheets, PDFs, scanned images, and more^{46, 47}.

Workstations within the organisation or a web browser can be used to access ERMS as an application. These techniques can be applied simply by dragging, copying, pasting, and saving, which makes it possible for users to access the ERMS system

with ease. You don't have to go anyplace because it's quite simple to navigate files and electronic information^{48, 49, 50}. It is essential for an institution to maintain uniform policies on record keeping. Users of an ERMS can select and predefine a retention policy for each folder. Moreover, extremely strong records-level security gives users complete control over who can view, modify, or upload records^{51, 52}. Based on established guidelines, an ERMS facilitates the process of retrieving electronic records from their storage locations. Early computerised methods for managing hard copy records gave rise to ERMS. According to earlier research, an organisation may securely store, retrieve, and distribute information with the use of an ERMS. Information might be safeguarded by this technology, which also ensures data backup in case of emergency.

In several cases, ERMS appears to be more effective at organising data for business continuity requirements and providing quick access to records. Records management systems (ERMS) improve record protection, reduce broadcast delays, encourage record pursuit, and extend record lifecycles. Additionally, ERMS guarantees business continuity in organisations and reduces concerns connected to lost or misplaced documents.^{53, 54, 55} The term "ERMS" describes a cutting-edge design or technology that supports effective service and manufacturing. The recent technological revolution has led to an astounding increase in the creation of digital data pertaining to user behavior^{56, 57}. The organisation network—which the ERMS uses for supporting services—protects and digitally monitors the sources of data inputs. Users' created input data need a system to manage it⁵⁸.

2.1.2 Security of Electronic Records Management System (ERMS)

A subset of information and communication technology (ICT) is electronic records management, which comprises advanced computerised methods for keeping official records in businesses. An electronic records management system uses computer hardware and software to handle both electronic and non-electronic records⁵⁹. "The creation, use, maintenance, protection, and disposal of electronically created records for the purposes of providing evidence of business activities" is what electronic records management entails⁶⁰.

Organizations are increasingly transitioning towards electronic records management due to advancements in paperless office technologies. To safeguard electronic records from unauthorized access, alterations, theft, or physical damage, it is imperative to implement robust electronic record protection practices. These practices involve placing limitations on user access to computer systems and maintaining control over the physical storage of electronic records⁶¹.

Electronic Records Protection involves the deployment of various computer applications and tools to ensure the security and integrity of digital records. One prominent example is Microsoft Access (MS Access), which provides security features designed to prevent unauthorized users from accessing confidential database information and to protect data from loss in the event of a system crash. Other record protection practices include the use of passwords, tokens, smart cards, biometric encryption (such as fingerprint or facial recognition), and more⁶².

MS Access is widely utilized in offices, banks, and companies where diverse categories of staff need secure access to records. Its security features are part of a

broader suite of tools used to maintain the integrity, accuracy, and trustworthiness of electronic records. These tools include firewalls, encryption, security copies, and specific access rights assigned to different user categories.

Electronic records protection embodies the principles of paperless management, supported by specialized information technology systems that safeguard an organization's business and personal information. This protection requires comprehensive planning, budgeting, organizing, and other managerial activities to ensure the adequate safety and security of official information. Essentially, an electronic records protection system is a software-based methodology used by organizations to manage all their records, regardless of format, throughout the entire records life cycle⁶².

The importance of implementing electronic records protection practices is underscored by scholars who argue that these measures serve as a form of disaster management in cases where stored records are threatened. For instance, in polytechnics, the shift to electronic records management practices is crucial for secretaries and administrative staff who must stay updated with these practices to ensure the security of official information. This need is particularly acute in Nigeria, where traditional paper filing systems still predominate, posing significant risks to the security of records.

The Importance of Information Management: Information has always been a critical resource for all types of organizations. In today's knowledge and innovation economy, the effective management of information is recognized as vital for the survival and

growth of businesses. Academics and professionals alike acknowledge that information, and its proficient management, are essential assets for the proper management of organizational knowledge. As organizations continue to embrace electronic records management, the adoption of comprehensive electronic records protection practices becomes essential⁶³. These practices not only protect sensitive information from a variety of threats but also support the overall integrity and efficiency of organizational operations. By integrating advanced security measures and staying abreast of technological advancements, organizations can ensure the reliable and secure management of their records, ultimately fostering an environment of trust and operational excellence^{66, 67, 68, 69, 70, 71, 72, 73}.

The management applications and information systems are evolving from a departmental approach towards integrated information management and document lifecycle management is becoming particularly important: the creation, storage, cataloguing, sharing and use (documents workflow) which allow this explicit knowledge to be shared by the entire organization, helping it to reach high levels of efficiency in its management. This shared knowledge and know-how is the foundation for organizational learning and contributes to the knowledge of the organization and to increasing the structural capital^{74, 75}.

This situation makes companies conscious of the importance of the management, quality and security of documents and they are undertaking initiatives for the introduction of records systems. These systems allow automation of the workflows related to the management and use of the organization's records. The introduction of an electronic record management system (ERMS) (records system) requires careful

consideration of the legal requirements and existing technological options. One of the most important functions that must be provided by these systems is security control, which must ensure that the non-public records are adequately protected and provide access to the public records⁷⁶. Moreover, due to its importance, records security control is closely bound to storage strategy, version control, records auditing and the organization's own security policies.

The records systems also called ERMS are primarily applications for managing electronic records which incorporate, administrate and provide access to the documents over time^{77,78}. The procedures, specifications, regulations, guides, manuals, etc., constitute the support for the daily processes carried out by the company. Efficient management of documented knowledge, quality and information security are critical factors for organisations^{66, 79, 80}. The aim of information security is to ensure that the information is accessible only to those who are authorized (confidentiality), to ensure the accuracy and completeness of the information and its processing methods (integrity) and to ensure that the authorized people have access to the information and its associated assets when they require it (availability)⁸¹. To support records creation, sharing and use activities, organizations must protect the integrity of these records for as long as necessary.

Electronic record management systems provide a well-established access control measures which only allows authorized access of records stored in the database⁸². Through measures such as encryptions and setting up of passwords and pins, the system prevents unauthorized access to confidential records/data. This ensures that sound service delivery is uninterrupted as the records' availability, integrity and

authenticity is always well guaranteed. Interestingly, organizations will realize the effectiveness of information governance in long term when productivity, user confidence, trust and service delivery is acknowledged. The authority in place that defines on the access, retrieval or storage procedure only becomes relevant when there is shared responsibilities and collaboration for greater results in the organization⁴².

Contrary, lack of information governance and central authority can render the records in a state of disarray, falsification, lack of privacy, unauthorized access and manipulation. These days many information technology models that were previously managed in tailor made approach and traditional model through the third parties are slowly being readjusted to fit the current regulatory framework on information governance more so to the government entities. Appropriate procedures are being implemented to enhance record management, archiving and transcription in a secure manner. The value of the database is so important and must be governed in a way that does not subject it to manipulation of the already secured and encrypted information.

Records management is the supervision and administration of digital or paper records, regardless of format. Records management activities include the creation, receipt, maintenance, use and disposal of records. In this context, a record is content that documents a business transaction. Documentation may exist in contracts, memos, paper files, electronic files, reports, emails, videos, instant message logs or database records. Paper records may be stored in physical boxes on-premises or at a storage facility. Digital records may be stored on storage media in-house or in the cloud⁸³. Records management is an established theory and methodology for ensuring the systematic management of all records and the information they contain throughout

their lifecycle. Records management is defined as the field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including the processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records⁷⁸. Records management is a systematic control of an organization's records throughout their life cycle, in order to meet operational business needs, statutory and fiscal requirements and community expectations⁸⁴.

Records management is the activities designed to control the life cycle of a record from its creation to its ultimate disposition⁸⁵. Traditionally records were held on paper, microfilm or microfiche, but are now predominantly created and held in electronic format or within electronic systems. The core concept underpinning records management theory is that of the lifecycle, which sees records having a series of phases from creation to final disposition ultimately resulting either in their controlled destruction or being retained on a permanent basis as an archival record. The process of changing records, the media on which records are stored and the ways records are used have changed greatly since the 1980s. Changes in technology facilitate changes in business methods. Additionally, technology has helped create a global market place, making it easier for people around the world to exchange goods and services. Organizations and their information systems face security threats from a wide range of sources, including computer-assisted fraud, sabotage, vandalism, theft, fire or flood. Damage caused by breaches such as computer viruses and computer hacking is becoming increasingly common and sophisticated. Dependence on information systems and services means that organizations are increasingly exposed and

vulnerable to security threats; security issues were not always the primary consideration in system design.

Security refers to the measures taken to protect against danger, loss, and criminal activities. It is essential to safeguard records from both damage and unauthorized access. The security method employed depends on the adopted storage method. For instance, in a computerized environment, confidentiality can be maintained by password-protecting documents or files, making it difficult for unauthorized users to access the information. Many organizations now store their data on computers, which also helps to create more physical space in offices.

The required level of security for a record varies depending on its content. Some records may have low sensitivity and thus require minimal or no security measures, while others with high sensitivity necessitate robust security protocols. The accessibility of a record should be determined by its sensitivity level. Once the sensitivity is established, it is crucial to identify who needs and who should have access to the record. Furthermore, when data or information needs to be transmitted to a third party or another location, whether inside or outside the organization, all necessary security precautions must be taken to protect it during transit. This includes selecting the most appropriate format, properly packaging the data, and ensuring it is correctly addressed.

Maintaining the authenticity of records is vital for both hard copy and electronic formats. Electronic records, such as emails or database entries, present unique challenges due to their ease of modification. Measures should include controlling

access to the data, assigning clear responsibility for the records, preventing accidental or malicious alterations, and regularly checking the accuracy of the recorded information. Organizations should carefully consider the most secure format or medium for storing records. To guard against data loss, especially for critical business documents, it may be necessary to implement backup procedures. Records should be stored in a manner that ensures their safety and security, both electronically and physically. Sensitive documents should never be left unattended on desks or visible on computer screens.

Additionally, organizations must determine the best methods for disposing of records at the end of their life cycle, ensuring that they are destroyed securely and appropriately. This comprehensive approach to record security helps maintain the integrity, confidentiality, and availability of vital information.

A Record Management Policy (RMP) can be described as documented and well laid down procedure for the management of records within an organization which include but not limited to the identification, classification, disposal, storage and custody issues, access and security, of records within an organization. It has also been identified as “Formal Corporate Policy for Digital Records”, it is an agreement across an organization on how digital records will be handled and the procedures to follow in order to achieve those intentions⁸⁷. RMP is central to the development and communication of a successful records management programme. In line with the above, RMP is defined as “planned, coordinated set of policies, procedures, people, systems and activities that are required to manage records.” based on the above definitions, it can be summed up that the purpose of RMP is to ensure that full and accurate records of all activities and decisions of an organization are created,

managed and retained or disposed of appropriately, and in accordance with relevant legislation. This will enable organizational records achieve information accessibility, business enhancement and improvement. It will also meet its obligations for accountability while ensuring that it protects the rights and interests of the organization, its staff, clients and the community.

Polytechnics recognizes that efficient and effective management of its records is necessary to support the core functions and activities needed to comply with its legal and regulatory obligations and as well contribute to the overall management of the polytechnic, hence, the need for a policy-guidelines on how it records should be managed. A records management policy is expected to describe the types as well nature of records to be generated, those to manage the records, as well as the competencies expected to be acquired by those people⁸⁸.

Despite the high increase in the amount of electronic data generated on a daily basis by both private organizations and institutions of government in Nigeria, it is sad to note that there seem to be no existing National Policy for the management of electronic records. This was confirmed by scholars in separate studies where they inferred that Nigeria is yet to develop a standard national policy on the management of its electronic records^{89,35}. Rather, all that is available is the Freedom of Information (FoI) Act which is facing difficulty in its proper implementation. The importance of a policy document for the management of electronic records cannot be overemphasized, in view of this, the United Kingdom National Archives (UKNA) issued Digital Records Management (DRM) guidelines through the UK's Lord Chancellor's office on the best practice for the management of electronic records. While reviewing the

policy, it was stated that the first volume of the policy dealt with principles of electronic records management; it gives guidance on the development of a corporate DRM policy⁹⁰.

The policy places importance on the development of formal corporate policies to establish the importance of digital records and the principles which should guide their management. Such a policy statement, endorsed by senior management, is a strong platform for the systematic development of consistent organization-wide procedures, and provides backing when seeking compliance in practice. The National Archives of Australia have also developed guidelines for managing digital records as contained in the Australia's Mossman's Municipal Council Records. The policy addresses the creation and capture, managing and preserving of digital records.

The guidelines cover areas such as how to create digital records, keeping digital records in Electronic Records Management systems, determining how to use Electronic Records Management metadata, storing and securing digital records and how to manage the migration of digital records. These guidelines also specify the type of digital records to be captured e.g. word-processed documents, emails, web-based digital records, and records in business information systems or databases. The guidelines emphasize that digital records should be created as evidence of business activity and captured into Electronic Records Management systems along with metadata that describes their content, structure and content.

Other than the UK and Australia, some few African countries also have in place policy document for the management of electronic records. An example is the

electronic records management policy of the Government of the Republic of Namibia (GRN)⁹¹. This policy is expected to give guidance to government ministries, offices and agencies that are required to manage records that are generated electronically. The policy drew its mandate from various legislative and regulatory instruments including the Archives Act 1992. It was also informed by the International Standards Organization (ISO) standard for records management, best practice guidelines and assessment tools from the International Records Management Trust (IRMT) as well as various international best practices, policies and guide lines such as those of Australia, Canada, UK, and South Africa. The policy document has four main sections.

The first section is the introduction which provides information on the effective dating, versioning and ownership of the document as well as the outlining of the legal and regulatory framework from which it draws its mandate. In addition, it has an outline of definitions and summary of the benefits of good records management. The second section covers five broad policy statements relating to strategy, legislative and regulatory framework compliance, systems design, interoperability and skills and competencies. The third section provides direction on the monitoring and assessment requirement in order to assist government ministries, offices and agencies to comply with the policy. The fourth section is an outline of references used to develop this policy which fall under the general categories of legislation and regulations, national policies, international standards and international best practice.

The four distinct sections as outlined in the policy document are as follows: Part A: Records and Archives Management Policy: outlines the general policy for records management, regardless of the format (paper or electronic). It is based on a principle

that a successful transition to electronic records management requires a functional general records management framework. Part B: E-Records Management Policy for E-Governance: outlines the principles which are specifically applicable for electronic records management. Part C: E-Records Management Guidelines: - specifies details for the handling of electronic records.

The Guidelines deal with the practicalities and procedures in two scenarios: firstly, a brief outline of the tasks of an Electronic Records Management System (ERMS), secondly detailed guidelines for handling electronic records without a dedicated ERMS. Part D: Functional Requirements for Electronic Records Management: This document details the tasks an ERMS is expected to perform, and the technical details required enabling long-term archival storage of permanent records. It is meant as a benchmark test guide for the purchase of electronic records management system software.

Another African country with a formal policy document for the management of electronic records is the Government of the Republic of South Africa. This is contained in a document titled “Records Management Policy Manual” (RMPM) published by the National Archives and Records Service of South Africa in 2006. The National Archives and Records Service of South Africa Act, 1996 has empowered the National Archives and Records Service to ensure the proper management and care of all public records.

To this end the National Archivist mandated the Records Management Division of the National Archives and Records Service to promote sound records management

practices in governmental bodies. The formulation of the policy was informed by the need for governmental bodies to control and manage records according to the legislation promulgated by government and to enable government and the public to have timely access to accurate and reliable information. The policy is divided into the following parts: Introduction, Management of public records, Records classification system for public records, Disposal of records, Caring for public records, Training, Compliance, monitoring and further information including detailed functional requirements for the management electronic records.

A review of a work on ‘Taxonomic framework for factors influencing ERMS adoption in organizations of higher professional education’ has revealed a number of strategies to overcome the challenges of managing digital records²⁵. It considers speeding up development and implementation of ICT policies as an important input to guide governments to establish an Electronic Records Management infrastructure. The study pointed out that without policies and procedures for the management of digital records, it would be difficult to manage the digital records. The policies should be formulated and implemented to ensure that digital records do not continue to suffer neglect. They should be linked to ICT policies and consequently to the broader national objectives.

A review of related literatures has revealed a number of RM standards that have been issued by National Archives of UK, Australia and the International Standards Organization (ISO) to guide the management of Electronic Records⁹⁰. In them, there seem to be a consensus that the National Archives of nations and countries should be responsible for setting mandatory standards for the creation of electronic records and that archival legislation should specify how such standards should be binding on all

government agencies. To this end, it was suggested that the compliance to this legislation should be the responsibility of each agency's chief executive.

This is because Electronic Records Management standards specify e-records management requirements, and their aim is to ensure that Electronic Records Management Systems are capable of capturing sufficient recordkeeping, metadata to establish and maintain the authenticity, reliability and integrity of the generated records. Although the Nigerian Archival Act was fast to take into cognizance fact that it is the responsibility of the Nation's National Archive to develop standards for the management of its electronic records, however, it is yet to develop one.

The International Standard on Information and Documentation 2001 was the first international standard for the management of electronic records. It provides methodology and processes that guide the management of records. It also provides a framework for any organization, public or private, to adopt and use in order to manage its records, irrespective of the medium on which the records are created, captured and maintained. The standard covers aspects which should be addressed in order to implement an Electronic Records Management system such as policy and responsibilities, strategies for designing and monitoring an Electronic Records Management system. It is written to be used by anyone within an organization, be they record keepers or other information professional, a manager.

The standard as published, highlighted that responsibilities for records management need to be defined and assigned, and promulgated throughout the organization so that, where a specific need to create and capture records is identified, it should be clear who is responsible for taking the necessary action⁷⁸. It advocates collaboration

between records management professionals, senior management/executives, systems specialists/administrators and everyone in the organization. This supports the recognition that records are inputs and outputs of business processes and therefore their creators and users have a role in managing them.

Furthermore ISO 15489 standards clearly shows how an organization can systematically and effectively document its digital transactions and do so in such a way that the business objectives are supported. The standard also provides a common international language for organizations to record and file material, in any medium or format or in any combination of media. It also provides a basis for an organization to develop policies and procedures which will ensure that information assets have the essential characteristics of accuracy, integrity and reliability. The question is whether our institutions of higher learning could learn from ISO 15489 the guidelines for implementation of entire Electronic Records Management framework.

Many national and regional governments have also issued standards or endorsed ISOs requirements for the management of e-records⁹⁰. For example, the National Archives of UK has endorsed a security standard BS ISO/IEC 27001:2005 Information technology - Security Techniques - Information Security Management systems – Requirements. The standard is to be used by all types of organizations, including government agencies. It specifies requirements for establishing, implementing, operating, monitoring, reviewing, maintaining and improving a documented Information Security Management System (ISMS) within the context of the organization's overall business risks. It specifies requirements for the implementation of security controls customized to the needs of individual organizations.

The ISMS is designed to ensure the selection of adequate and proportionate security controls that protect information assets and give confidence to interested parties. If an organization already has an operative business process management system, it is preferable in most cases to satisfy the requirements of this standard within the existing management system. By implementing this security standard, organizations are able to reduce information security risks and threats. It provides a framework for improving security controls and their implementation. Some guidelines for designing and implementing a record keeping system issued by the Australian National Archives; these provide steps which public organizations can follow to ensure that they maintain adequate security for their digital records and systems.

This list is not exhaustive and public agencies are encouraged to select a combination of methods to suit their needs: Limit access to digital records, and the systems on which those records are created and kept, to authorized personnel in order to protect the integrity of the record and prevent unlawful alteration or destruction of records; Establish network security systems, such as firewalls, to protect against unauthorized access(e.g. hackers) to systems that are accessible through external connections, such as the Internet; Install appropriate gateway filter software on messaging systems, and ensure that filter definitions are regularly updated, to protect against spam, denial of service attacks and malicious code, such as computer viruses; Implement public key infrastructure (PKI) encryption technologies to ensure secure transmission of digital records to external parties; Lock final digital records to prevent any subsequent alterations or inadvertent destruction(e.g. finalizing records as 'read-only' within an electronic recordkeeping system); Use digital signature technologies to authenticate digital records and provide security and confidence in authorship; Store vital digital records either offline or on systems without external links; Establish appropriate

systems backup procedures and disaster recovery strategies to protect against loss of digital records; Develop and implement audit trails to detect who accesses a system, whether prescribed security procedures were followed and whether fraud or unauthorized acts have occurred, or might occur⁸⁷.

These requirements make it possible to install Electronic Records Management systems which support an institution's process. The security of the database is very important as it ensure many risks are minimized and consistent compliance to the set regulations in organizations. Information security, sometimes shortened to InfoSec, is the practice of protecting information by mitigating information risks. It is part of information risk management^{92, 93, 94}. It typically involves preventing or reducing the probability of unauthorized/inappropriate access to data, or the unlawful use, disclosure, disruption, deletion, corruption, modification, inspection, recording, or devaluation of information⁹⁵. It also involves actions intended to reduce the adverse impacts of such incidents. Protected information may take any form, e.g. electronic or physical, tangible (e.g. paperwork) or intangible (e.g. knowledge)⁹⁶. Information security's primary focus is the balanced protection of the data confidentiality, data integrity, and data availability of data (also known as the CIA triad) while maintaining a focus on efficient policy implementation, all without hampering organization productivity⁹⁷. This is largely achieved through a structured risk management process.

The CIA triad of confidentiality, integrity, and availability is at the heart of information security⁹⁸. The members of the classic InfoSec triad - confidentiality, integrity, and availability - are interchangeably referred to in the literature as security attributes, properties, security goals, fundamental aspects, information criteria, critical information characteristics and basic building blocks⁹⁹. In information security,

confidentiality is the property, that information is not made available or disclosed to unauthorized individuals, entities, or processes¹⁰⁰. While similar to “privacy,” the two words are not interchangeable. Rather, confidentiality is a component of privacy that implements to protect our data from unauthorized viewers¹⁰¹. Examples of confidentiality of electronic data being compromised include laptop theft, password theft, or sensitive emails being sent to the incorrect individuals¹⁰².

In IT security, data integrity means maintaining and assuring the accuracy and completeness of data over its entire lifecycle¹⁰³. This means that data cannot be modified in an unauthorized or undetected manner¹⁰⁴. This is not the same thing as referential integrity in databases, although it can be viewed as a special case of consistency as understood in the classic ACID model of transaction processing¹⁰⁵. Information security systems typically incorporate controls to ensure their own integrity, in particular protecting the kernel or core functions against both deliberate and accidental threats¹⁰⁶.

Multi-purpose and multi-user computer systems aim to compartmentalize the data and processing such that no user or process can adversely impact another: the controls may not succeed however, as we see in incidents such as malware infections, hacks, data theft, fraud, and privacy breaches¹⁰⁷. More broadly, integrity is an information security principle that involves human/social, process, and commercial integrity, as well as data integrity. As such it touches on aspects such as credibility, consistency, truthfulness, completeness, accuracy, timeliness, and assurance¹⁰⁸.

For any information system to serve its purpose, the information must be available when it is needed. This means the computing systems used to store and process the information, the security controls used to protect it, and the communication channels used to access it must be functioning correctly¹⁰⁹. High availability systems aim to remain available at all times, preventing service disruptions due to power outages, hardware failures, and system upgrades. Ensuring availability also involves preventing denial-of-service attacks, such as a flood of incoming messages to the target system, essentially forcing it to shut down. In the realm of information security, availability can often be viewed as one of the most important parts of a successful information security program.

Ultimately end-users need to be able to perform job functions; by ensuring availability an organization is able to perform to the standards that an organization's stakeholders expect¹¹⁰. This can involve topics such as proxy configurations, outside web access, the ability to access shared drives and the ability to send emails. Executives oftentimes do not understand the technical side of information security and look at availability as an easy fix, but this often requires collaboration from many different organizational teams, such as network operations, development operations, incident response, and policy/change management. A successful information security team involves many different key roles to mesh and align for the CIA triad to be provided effectively¹⁰⁸.

2.1.3 Awareness of Electronic Records Management System (ERMS)

Any organisation, whether public or private, has long been thought to consider information to be a vital resource. At the moment, it serves as a criterion for dividing the world's nations into two groups: those with abundant knowledge and those with

little or no information. It appears that the availability, usability, and accessibility of information are strongly correlated with a nation's potential to develop nationally. Information, therefore, is a national resource that may be applied to the production of goods and services with added value¹¹¹. Information and records go hand in hand since they both include data that is essential for organising, making decisions, and maintaining control in any kind of organisation, including public sector organisations. Regardless of the medium or features, a record is something that serves as evidence of existence and can be utilised to replicate or demonstrate a state of existence¹¹².

An organisation either creates or receives a record in the course of conducting business, complying with legal requirements, or both. Records can be digital information such as electronic office papers, data in application databases, web content, and electronic mail, or they can be tangible objects like paper documents like birth certificates, driver's licences, and actual medical x-rays. The application of methodical and scientific controls to recorded information necessary for an organization's commercial operations is known as records management¹¹³.

The discipline of management known as records management is in charge of the effective and methodical control of the formation, receipt, upkeep, use, and disposal of records. It also handles the procedures for gathering and preserving data regarding business transactions and activities in the form of records⁷⁸. A variety of services pertaining to the management and use of records are provided; specialised systems for managing records are designed, implemented, and administered; policies and standards are set; responsibilities and authorities are assigned; procedures and

guidelines are established and promulgated; and records management is integrated into business systems and processes.

Likewise, records management is defined by academics as the organised supervision of the entire life cycle of recorded data, from its production to its final disposal or long-term storage¹¹⁴. A record's life cycle comprises its conception, creation, distribution, use, upkeep, storage, disposal, and stage of archival preservation. Establishing program priorities and guiding policy are two areas where records management can be very helpful¹¹⁵. It can also instill a feeling of coherence and purpose throughout the administration. It so aims to create records that are required for an organisation to run effectively and successfully, to produce records when needed, to preserve records important to the organization's ongoing operations, and to create only those records that are required.

An organisation cannot operate without its records, so they are crucial. Any successful organization's daily activities rely only on its records. Without maintaining, utilising, and preserving their records, many organisations will not be able to continue. Any written document, video, electronic procedure, or other information compiled, recorded, or preserved in any other way is referred to as a record¹¹⁶. The life cycle of a record includes its creation, upkeep, use, and disposal¹¹⁷. He emphasises the significance of maintaining records that are made and that if they are not required, they should not be created. Thus, before creating any record, all phases of the record's life cycle must be taken into account. An organization cannot but develop a culture of maintaining a record in whatever form which will serve as a reference tool in helping the organization fulfill its obligation for effective management of the problems of that organization¹¹⁸.

Organisations cannot perform their operational procedures and activities without the use of records, which are a crucial administrative tool¹¹⁹. Records serve as gauges for assessing an organization's success. Furthermore, records are the byproducts of administrative and managerial tasks and serve as a reflection of the general calibre of the business performance of the organisation. If records serve as gauges for an organization's performance, then an organisation cannot operate in the absence of records. Records are defined as information that has been created, received, or maintained in any format by a system, person, or organisation during the course of business or other activities. These records are preserved in a manner that is easily accessible and serve as proof of the activity in question¹²⁰.

The discipline of management known as records management is in charge of organising and regulating the production, upkeep, utilisation, duplication, and disposal of records. The three stages that records go through—the current, semi-current, and non-current stages—are related to records management¹²¹. Records are created and used regularly at this point. Records are occasionally cited in the semi-current stage, which is the intermediate stage. After being evaluated, they are transferred to the archives and are no longer referred to at the non-current stage. Form control, correspondence control, reports management and control, active file management, records inventory and appraisal, records retention and disposal, archives management and control, and copy reproduction (reprography) are all included in the comprehensive activity of records and information management¹²². In conventional paper-based organizations, paper continues to be viewed as the material for records in administrative documentations¹²³.

Records management encompasses all paperwork from the time a new record is created until it is decided to either destroy it or preserve it indefinitely¹²⁴. It is the application of methodical examination and scientific oversight of business documents from the point of creation to the points of processing, preservation, security, and disposal. The generation, receiving, distribution, use, retention, storage, retrieval, protection, preservation, and ultimate disposal of all forms of recorded information across the organisation are covered by policies, procedures, and standards in records management¹²⁵. Planning, carrying out, and reviewing the procedures for maintaining an organization's records are all part of records management¹²⁶. He emphasises that information creation's quantity and quality may be managed with the use of records management.

As a result, the data can be preserved in a way that successfully meets the needs of the company. The quality, amount, and cost of records are considered as well as the processes, systems, operations, space, equipment, and personnel needed to manage the records¹²⁷. For this reason, systems and procedures for creating, keeping, and getting rid of records that are essential to an organization's smooth operation must be developed and run by records management functions.

Every organisation needs effective records management procedures to help it fulfil the objectives that its founders laid out when they first envisioned the company. In order to operate public institutions effectively and efficiently, records management plays a crucial role. In actuality, the practice plays a crucial role in the management of the institutions since it records the creation and execution of suitable service plans, enabling adequate task monitoring¹²⁸. Controlling the growth and creation of records, cutting operating costs, boosting productivity and efficiency, incorporating new

records management technologies, guaranteeing regulatory compliance, lowering the risk of litigation, protecting sensitive data, facilitating better management decision-making, maintaining the corporate memory, and promoting professionalism in business operations are the main motivations behind records management practices in organisations¹²⁹.

The need for records preservation is, therefore, paramount to the cultural heritage of the past and for future generations obtainable in any organization¹³⁰. Decision making in an organization is an administrative function and invariably requires information in the form of records¹¹⁶. They state that the art of "getting things done" is typically mentioned in relation to administration, but they also highlight the procedures and techniques that guarantee decisive action. There are guidelines outlined for getting people to act in unison. Within an organisation, decisions are taken at three separate levels: lower, medium, and upper. Whatever the level, information will be needed in one form or another. Decisions are made regarding the distribution of financial resources, the order of importance of various programmes, the awarding of social benefits, the initiation of new projects, the termination of unsuccessful endeavours, the information to be made public, and the degree of secrecy required for specific types of data in all areas of endeavour. Decision-makers can obtain the information they need from records and archives. Thus, the primary inquiry is whether these records are accessible to these decision-makers and if they are aware of them and use them in their decision-making process. Because records are needed by administrators to make timely and accurate decisions, they also benefit from the efficient and successful management of records inside an organisation or institution. The foundation of administrative acts is decision-making, and administrators carry out plans via action¹¹⁶.

The most fundamental and important resource for any organisation is information, which like all other company assets needs to be managed well. Records management makes sure that data is freely accessible and regularly deleted when it is no longer needed, allowing organisations to meet legal and financial requirements in addition to operating on a daily basis. For example, keeping government records preserved guarantees that it may be held responsible for its acts, enables society to track the historical development of policy, and provides access to a valuable resource for future decision-making¹³¹.

Every organisation keeps records in order to substantiate and validate their transactions. As a result, records are valuable sources of knowledge and information regardless of their format. They support national growth and guarantee effective accountability and openness in decision-making^{223, 33}. As a result, proper record-keeping practices—whether digital or paper—have gained attention not just in Nigeria but also internationally. As a result, in the absence of accurate records, organisations are forced to make snap judgements devoid of institutional memory. Organisations must gain the ability to handle records and information if they hope to take a significant part in the national development process¹³⁴.

The rationale is because accurate, timely, and relevant data and information are always needed to meet the demands of planning, starting, carrying out, monitoring, and assessing activities. Because of this, it is the responsibility of every organisation to track and evaluate its progress towards inclusive, participatory national economic processes and strong corporate ethics, which are based on the values of transparency, accountability, and integrity in relation to records management¹³⁵.

An electronic programme, or group of programmes, called an Electronic Records Management System (ERMS) is used to store and maintain current records. ERMS has been widely used to improve educational institutions' performance. The planning and decision-making processes are aided by the system, which improves skills. Technology has had a major role in the field of education in changing old teaching and learning methods into the current approach that requires information availability. Students should have access to information whenever needed to provide them with the resources they need to succeed academically^{136, 137}.

Technology has also aided in the provision of information so that judgements can be made with knowledge. In many educational fields, especially management, decision-making concerns are ubiquitous. In this field, the majority of decisions are made based on hypothesis and primary evidence. To tackle these problems, well-informed judgements requiring a thorough assessment of the available data must be made.^{19, 139, 138}. These days, a lot of administrators understand how critical it is to have readily available, accurate information to back both long-term strategic planning and judgements that enhance daily operations. It is challenging to locate the pertinent, accurate, and helpful information required for the higher education decision-making process due to the abundance of systems. Not all information can be considered as records until they are proven genuine and authentic. Besides, these records must be comprehensive, available, accessible, and secured^{140, 141}.

Electronic records are widely used in higher education institutions because they contain information that is necessary for the smooth operation of the educational

system, optimal service delivery, and support of managerial decision-making while guaranteeing the application of ongoing policy. When processed, recorded information becomes knowledge and aids in the prompt and well-informed decision-making process. Additionally, student records are essential educational resources that help define methods and assess and improve performance^{19, 116, 20}. Electronic records are essential for making decisions, but there are issues with their accessibility.

A computer programme, or group of programmes, used to maintain track of records and their storage is known as an ERMS. Additionally, it can be used to manage record generation and maintenance in terms of classification, retention, usage, and schedule disposal, as well as record access and use management¹⁴². The preservation of information for use in future transactions is the main goal of record-keeping in organisations. Records ensure that important information may be retained and conserved by containing organisational accountability, safeguarding the proof of its actions, and facilitating prompt administrative information access.

These documents could serve as proof of the transactions that the organisation made¹⁴³. Moreover, efficient e-records serve as the cornerstone of good governance, organising policies, transactions, and governance-related activities. They also serve as a useful information source that facilitates decision-making and accountability. Furthermore, researchers found that because of the constantly changing need for information, ERMS has become practically required in organisations and their departments¹⁴⁴.

Time is saved and transparency is increased in this way by the system, albeit more documents may only be added with the development of a policy. Furthermore, research has shown that despite efforts to strengthen governance structures, the majority of educational institutions in underdeveloped countries continue to struggle

with managing documents and e-records. The policy, digital records capacity, records management unit, senior management support, user education and training, and the storage, retrieval, and disposal of documents in pertinent systems and procedures are all inadequate in records management¹⁴⁵.

Electronic Records Management Systems (ERMS) ensure effective management of resources, minimizes litigation risks, improves accountability and transparency and provides the basis for complying with legal requirements^{146, 147,148,149,150}. For that reason, managers should adopt appropriate strategies for successful implementation of ERMS. Implementation of electronic records management system requires management skills pertaining to procurement, change management and training, which will enable managers have in-depth knowledge of ERMS¹⁵¹. The necessity of develop a comprehensive change management plan, since the success will largely depend on the acceptance and usage of the system by employees¹⁵². Several studies discuss communication, training and motivation as some of the critical elements that should be embedded in the change management approach when creating an ERMS awareness.

Literature concurs that communication is a key factor for successful change, as it is a tool used for announcing, explaining and preparing employees for both negative and positive effects of the imminent change^{153, 154}. The strategies used to communicate change should be of good quality and the form of communication must be understandable to the audience¹⁵⁵. Communication during the change process balances mixed feelings amongst staff and influences participation of staff in the change process^{155, 156}. Without communication, there will be unresolved feelings of uncertainty and unwillingness to cooperate by staff¹⁵⁷. Organizational silence and insufficient communication are some of the reasons why organizational change efforts

fail^{158, 159}. It was revealed that staff preferred oral communication such as meetings and workshops as they had the capability to instill knowledge, skills and wisdom as compared to written communication.

Generally, training improves performance hence it is employed as a change management strategy¹⁶⁰. In order for staff to display consistent commitment to change, they must be trained and equipped at every level of the change process¹⁵⁵. Training enables staff to cope with the challenges of today's competitive business environment¹⁶¹. It is used as a means of support by managers to give employees new necessary skills and knowledge needed for the change initiative¹⁶². During change initiatives, symptoms such as anxiety, low morale and stress are likely to increase. These problems affect productivity, efficiency and effectiveness negatively, hence, it is vital to employ training strategies when implementing changes¹⁵³.

When the human component of change is properly understood and appropriate steps are taken to foster a healthy work environment, change is more effective¹⁶³. The drive of the workforce is what makes this possible¹⁶⁴. Anxiety, frustration, exhaustion and resistance, and bewilderment were the organization's feelings during the change process in some of the failed change management initiatives. Employee motivation, morale, and perception of job security are all greatly impacted by the atmosphere of the company. Thus, for change to be successful, there needs to be a sense of purpose, momentum, hope, confidence, and excitement.¹⁶³.

2.2 Theoretical Framework

A structure of concepts seen in the literature might be referred to as a theoretical framework. It can also be viewed as the study's ready-made plan. It offers the

framework for outlining a researcher's philosophical, epistemological, methodological, and analytical definition of the study. The theoretical framework also helps the study locate the best research methodology, analytical techniques, and procedures for the planned study, which will improve the significance and generalizability of the research findings. Three theories will be used for all the variables respectively. Unified Theory of Acceptance and Use of Technology (UTAUT) and The Information Security Model will underpin the dependent variables which are Use of Electronic Records Management Systems and Security of Electronic Records Management System. The theory that will be used to measure the independent variable which is Awareness of Electronic Records Management System is the Situation Awareness Theory (SAT).

2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

About three decades ago, the research community became more interested in the adoption of technology in private and organisational contexts^{12, 165, 166, 167}. A significant volume of data on user behaviour connected to technology adoption has been produced by technology acceptance research by the year 2000¹⁶⁸. The adoption of the technology was described by a variety of models and hypotheses, which together accounted for 40% of the variation in technology usage intention^{169, 170, 171}. The models' interdisciplinary origins restricted the situations in which these theories might be applied. In order to offer a comprehensive comprehension of technology acceptance, researchers aim to create a unified theory of technology acceptance through the integration of essential characteristics that predict behavioural intention and use. In order to achieve this goal, a study of the fundamental literature on IS acceptance was conducted in order to identify theoretical and contextual parallels and

differences between the theories of technology acceptance that come from the three research streams of social psychology, IS management, and behavioural psychology¹³.

The theories present a variety of viewpoints on the acceptance and implementation of technology because they originate from many academic fields. The Social Cognitive Theory (SCT), the Theory of Planned Behaviour (TPB), and the Theory of Reasoned Action (TRA) reflected the socio-psychological perspective on studies on individual behaviour. The impact of a person's attitude towards behaviour, subjective norm, and perceived behavioural control on their behavioural intention is how TRA and TPB measure an individual's behaviour.¹⁷² The theories are applied in IS management to investigate the impact of attitudes and social norms on accepting technology, as well as the perceived difficulty of completing the task^{173, 174}. TRA made a significant theoretical contribution to IS acceptance theories by offering a framework for understanding human conduct^{172, 12}. The foundation of social cognitive theory (SCT) is the idea that behavioural, cognitive, and environmental factors—that is, performance and outcome expectations, personal and outcome expectations, affect, and anxiety—interact to influence people's conduct¹⁷⁵. The hypothesis has been used to the study of computer-human interaction^{165, 176}.

The Technology Acceptance Model (TAM), the combined TAM and TPB model (C-TAM-TPB), Innovation Diffusion Theory (IDT), and the model of PC utilisation (MPCU) were the main sources of information used to explain the acceptance of technology from the perspective of IS management. Although TAM and C-TAM-TPB emphasise how crucial a cognitive reaction to IS characteristics is for behaviour prediction^{13, 170}. In order to predict whether innovation will be adopted, the Innovation

Diffusion Theory (IDT) focuses on system traits and attributes (e.g. relative advantage, complexity, compatibility, image) ¹⁷⁷.

Unlike other theories examining IS and innovation adoption, the model of PC utilisation (MPCU) has very specific implications because it only considers the factors that support the use of personal computers, namely job fit, complexity, long-term consequences, affect towards use, facilitating conditions, and social factors^{178, 13, 170, 177}. The Motivational Model (MM), which suggests that user motivations can be used to examine technology adoption and use behaviour, represents the behavioural psychology perspective on technology acceptance^{180, 179}. Users typically gauge how likely they are to behave based on how much their actions generate external reinforcement in the form of instrumental rewards (intrinsic motives) or interior reinforcement in the form of enjoyment, satisfaction, and fun (intrinsic motives)¹⁸⁰.

The author's analysis of the aforementioned theories revealed certain drawbacks, which in turn made the development of the Unified Theory of Acceptance and Use of Technology necessary. The main drawback was that there was no empirical testing or comparison of the prevalent technological acceptance models in the literature, which allowed one to speculate about the theoretical constructs' capacity for prediction. Research on how people utilise technology had mostly ignored the usage of more sophisticated technologies in favour of simpler systems, including personal computers (PCs)¹³. The explanatory ability of theories is limited when a single technology is the focus since different IT systems and environments have different effects on people's experiences, purchase decisions, and use cases.¹⁸¹. For example, the motivations of consumers purchasing entertainment technology are not similar to the needs of

employees driving the usage of enterprise management systems. The latter technology has a strong utilitarian value and is predominantly used in mandatory settings.

Prior literature also shown several methodological shortcomings. The majority of research had employed a cross-sectional methodology, measuring variables at either the pre- or post-acceptance stages; nevertheless, certain constructs, including experience, required longitudinal analysis^{13, 170}. The limitations recommended that in order to properly comprehend the dynamics of technology acceptance and use, a longitudinal approach be used. Ultimately, the generalizability of the results was limited by the fact that earlier research had concentrated on technology adoption in a voluntary setting (i.e., when society has no influence on technology use).

Therefore, technology acceptance was examined in both required and optional scenarios to guarantee the models' broader implications. The authors were able to create a single acceptance model that included and represented all significant acceptance factors, thanks to the empirical comparison of the theories. According to the UTAUT theoretical model, behavioural intention dictates how technology is actually used. The direct impact of four major constructs—performance expectancy, effort expectancy, social influence, and facilitating conditions—determines the perceived likelihood of technology adoption. However, the ERMS's frequency of use, its purpose, and the amount of time spent on each use have been modified for this study. Frequency of use of ERMS is the rate of use of ERMS by administrative staff of Public Polytechnics in Edo State as documented by the number of times per day, week, or month, as appropriate. Purpose of use of ERMS is the belief that the use of technology among administrative staff of Public Polytechnics in Edo State will attain goals in job performance. While Specific time spent on each use of ERMS is the exact

time devoted to the use of ERMS by administrative staff of Public Polytechnics in Edo State. These metrics were adapted from literatures.

The effect of predictors is moderated by age, gender, experience and voluntariness of use¹³. Performance expectancy is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance. Performance expectancy is based on the constructs from Technology Acceptance Model (TAM), TAM2, Combined TAM and the Theory of Planned Behaviour (CTAMTPB), Motivational Model (MM), the model of PC utilization (MPCU), Innovation Diffusion Theory (IDT) and Social Cognitive Theory (SCT) (that is, perceived usefulness, extrinsic motivation, job-fit, relative advantage and outcome expectations). It is the strongest predictor of use intention and is significant in both voluntary and mandatory settings^{57, 182}.

Effort expectancy is defined as the degree of ease associated with the use of the system¹³. Effort Expectancy is constructed from perceived ease of use and complexity driven from TAM, MPCU, IDT, which share a similarity in definitions and scales. The effect of the construct becomes non-significant after extended usage of technology^{183, 184}. Social Influence is defined as "the degree to which an individual perceives that important others believe he or she should use the new system"¹³. Social influence is similar to the subjective norms, social factors and image constructs used in TRA, TAM2, TPB, CTAMTPB, MPCU, and IDT in the way that they denote that the behaviour of people is adjusted to the perception of others about them. The effect of social influence is significant when the use of technology is mandated¹³. In the mandatory context, individuals might use technology due to compliance requirement,

but not personal preferences¹⁷¹. This might explain the inconsistent effect that the construct demonstrated across further studies validating the model^{57, 184}.

Facilitating conditions is defined as the degree to which an individual believes that an organization's and technical infrastructure exists to support the use of the system¹³. The facilitating conditions construct is formed from compatibility, perceived behavioural control and facilitating conditions constructs drawn from TPB, CTAMTPB, MPCU and IDT. Facilitating conditions have a direct positive effect on intention to use, but after initial use, the effect becomes non-significant. Therefore, the model proposes that facilitating conditions have a direct significant effect on use behaviour.

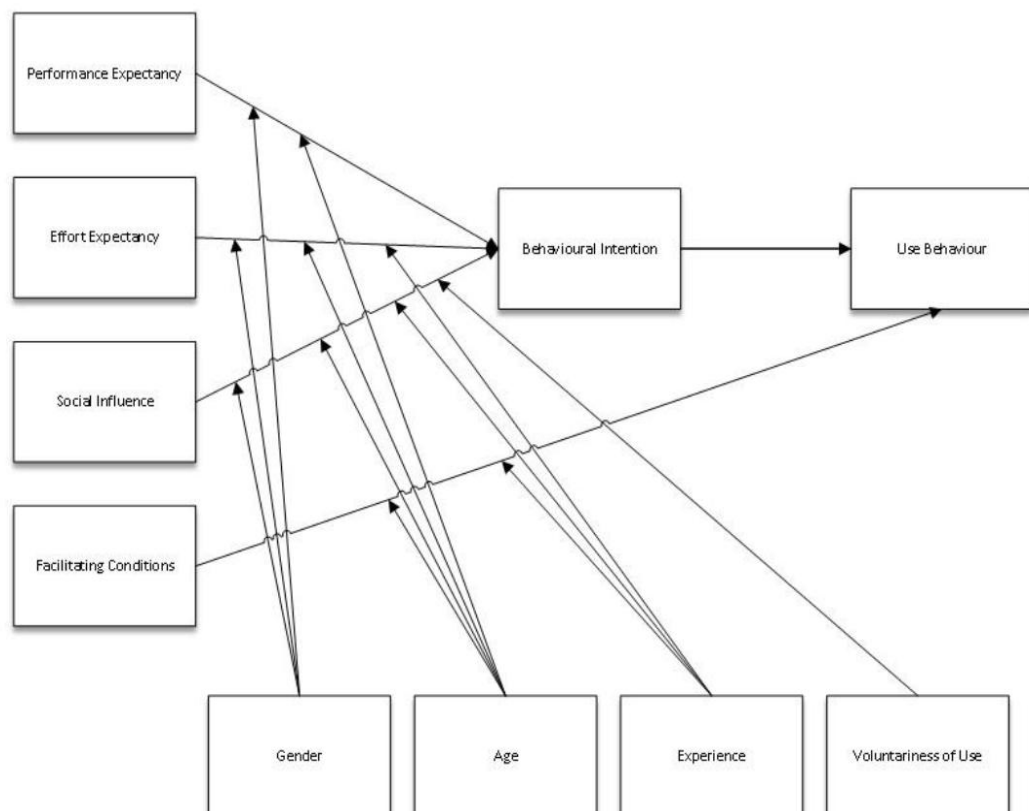


Fig. 2.1: Unified Theory of Acceptance and Use of Technology¹⁷⁵.

Unified Theory of Acceptance and Use of Technology(UTAUT) has contributed to the literature in a number of ways. By contrasting well-known theories of technology adoption—which frequently present conflicting or incomplete viewpoints—the model offers empirical insight into the acceptance of technology. Compared to other models that study technological adoption, UTAUT has better predictive value because it shows that the proposed components explain 70% of the variance in use intention.^{185, 186}. The purpose of formulating UTAUT was to integrate the fragmented theory and research on individual acceptance of information technology into a unified theoretical model. UTAUT advanced individual acceptance research by unifying the theoretical perspectives common in the literature and incorporating four moderators to account for dynamic influences¹⁸⁷. UTAUT is relevant to this study as it helps to evaluate the use of information systems and information technology in the selected public polytechnics. Also, if users adopt the four main factors of UTAUT, they can develop a positive attitude towards using the new system. Therefore, individuals can show a positive attitude towards the system that satisfies their performance expectations and effort expectations, and thus the facilitating conditions provided by the system will create an increasing social impact among individuals.

2.2.2 The Information Security Model (ISM)

An approach for defining and implementing security policies is the information security model. A formal model of access rights, a computational model, a distributed computing model, or no theoretical foundation at all can serve as the foundation for a security model. A computer security policy is used to implement the information security model. Information security, sometimes known as InfoSec, is the process of reducing information hazards in order to safeguard data⁹². Information risk

management includes it^{93, 94}. It typically involves preventing or reducing the probability of unauthorized/inappropriate access to data, or the unlawful use, disclosure, disruption, deletion, corruption, modification, inspection, recording, or devaluation of information⁹⁵. It also involves actions intended to reduce the adverse impacts of such incidents. Protected information may take any form, e.g. electronic or physical, tangible (e.g. paperwork) or intangible (e.g. knowledge)^{96,188}.

Information security's primary focus is the balanced protection of the data confidentiality, data integrity, and data availability of data (also known as the CIA triad) while maintaining a focus on efficient policy implementation, all without hampering organization productivity⁹⁷. Confidentiality is the characteristic of data, information and information systems being disclosed only to authorized persons, entities and processes at authorized times and in the authorized manner. This means protecting records from unauthorized access and disclosure. Integrity is the characteristic of data, information and information systems being accurate and complete and the preservation of accuracy and completeness. This means safeguarding the authenticity, accuracy and completeness of records. Availability is the characteristic of data, information and information system being accessible and useable on a timely basis in the required manner. This entails making certain that authorised users may access the records and related services as needed. Identifying information and related assets, as well as potential threats, vulnerabilities, and impacts, evaluating the risks, and determining how to address or treat the risks—that is, to avoid, mitigate, share, or accept them—are the main steps in an organised risk management process. Where risk mitigation is necessary, other steps include choosing or designing appropriate security controls and putting them into place; monitoring the

activities and making adjustments as needed to address any issues, changes, and improvement opportunities.

Confidentiality, integrity, and availability are the three primary pillars of the CIA triad information security concept. Every element stands for a core goal of information security. The following three elements make up the CIA triad: Discretion: This element is frequently connected to encryption and secrecy. In this case, confidentiality refers to restricting access to the data to parties who have been given permission. Confidential data are not revealed to those who shouldn't have access to them or who don't need them, indicating that their security has not been breached by outside parties. Information must be arranged according to the sensitivity of the material and who needs access in order to maintain confidentiality⁹⁷.

A confidentiality breach can occur via a variety of techniques, such as social engineering or hacking. Integrity: The assurance that the data has not been altered or deteriorated before, during, or after submission is known as data integrity. It is the assurance that no unauthorised alteration, whether deliberate or accidental, has been made to the data. The upload or transmission of data, as well as the document's storage in the database or collection, are the two stages of the transmission process where integrity may be jeopardised. Availability denotes the degree to which authorised users can access the data when needed. A system needs operational computer systems, security measures, and communication channels in order to demonstrate availability. Critical systems, such as safety systems, medical equipment, and power generation, may have strict availability requirements. These systems need to be safe from hardware malfunctions, power outages, and other occurrences that could affect system availability in addition to being resilient against cyberattacks.

Information assurance, or preserving the confidentiality, integrity, and availability (CIA) of information, is the fundamental component of information security. It guarantees that information is not jeopardised in any manner when important problems emerge. Natural calamities, computer/server malfunctions, and physical theft are a few examples of these problems. Enterprise digital initiatives are becoming more and more important, and information technology (IT) security specialists are generally usually in charge of information assurance, even though paper-based company processes are still common and require their own set of information security policies. These experts use technology (usually computer systems) to implement information security⁹².

It is important to remember that a computer does not always refer to a desktop computer at home. Any device containing a CPU and memory can be called a computer. These gadgets might be as basic as standalone, non-networked calculators or as sophisticated as mobile, networked computers on tablets and smartphones. A huge corporation or facility will almost always employ IT security specialists because of the nature and worth of the data that these larger businesses handle. They are in charge of protecting all firm technology from malevolent cyberattacks, which frequently aim to obtain sensitive personal data or take over internal systems.

The CIA triad of confidentiality, integrity, and availability is at the heart of information security⁹⁸. (The members of the classic InfoSec triad—confidentiality, integrity, and availability—are interchangeably referred to in the literature as security attributes, properties, security goals, fundamental aspects, information criteria, critical information characteristics and basic building blocks)¹⁸⁹.

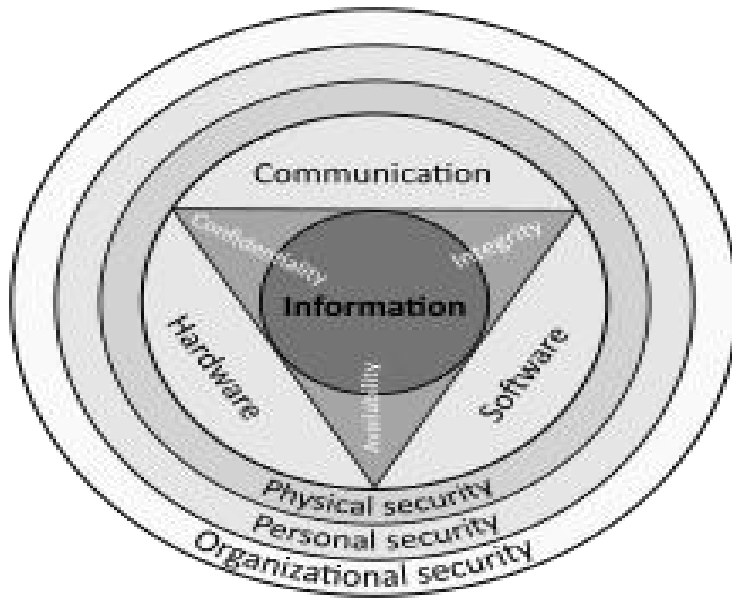


Figure 2.2: Information Security Model (CIA Triad)¹⁸⁹.

Information Systems are composed in three main portions, hardware, software and communications with the purpose to help identify and apply information security industry standards, as mechanisms of protection and prevention, at three levels or layers: physical, personal and organizational. Essentially, procedures or policies are implemented to tell administrators, users and operators how to use products to ensure information security within the organizations¹⁹⁰.

2.2.3 Situation Awareness Theory (SAT)

Situational awareness can be briefly described as being aware of what is happening around you, understanding what that information means now, and predicting what it will mean in the future¹⁹¹. The term situation awareness (SA) refers to the knowledge an individual or a group of individuals have about the context they operate in. Situation Awareness has been defined as “accessibility of a comprehensive and coherent situation representation which is continuously being updated in accordance with the results of recurrent situation assessments”¹⁹². Awareness is the state or ability

to perceive, to understand or to be conscious of events, objects or patterns. It is the state or ability of administrative staff of Public Polytechnics in Edo State to perceive, understand or to be conscious of events, objects or patterns. Perception is the identification of the prevailing circumstances surrounding the need for the system among administrative staff of Public Polytechnics in Edo State; Comprehension is ability of administrative staff of Public Polytechnics in Edo State to understand the current situation; that is, understanding of the prevailing circumstances that have been identified; while Projection is the projection of the current situation into the future in an attempt to predict the evolution of the tactical situation by employees of Edo State's Public Polytechnics in administration. SA is essentially about being aware of your surroundings. It is a notion that seems to appeal to practitioners who are attempting to improve efficiency and safety in a range of work environments. In the context of industrial safety, in particular, where a misinterpretation or lack of understanding of the circumstances can result in significant mishaps, SA has been the subject of much research and is frequently the target of workplace interventions.

Ensley's concept of self-awareness (SA), which is made up of three hierarchical levels of environmental knowledge, has grown to be the prevalent perspective on SA in research and among practitioners. According to this model, level 1 SA entails identifying the pertinent environmental factors, level 2 involves combining the information from level 1 to create a cohesive and all-encompassing picture of the situation, and level 3 involves using level 1 and level 2 information to predict how the environment will look in the near future.

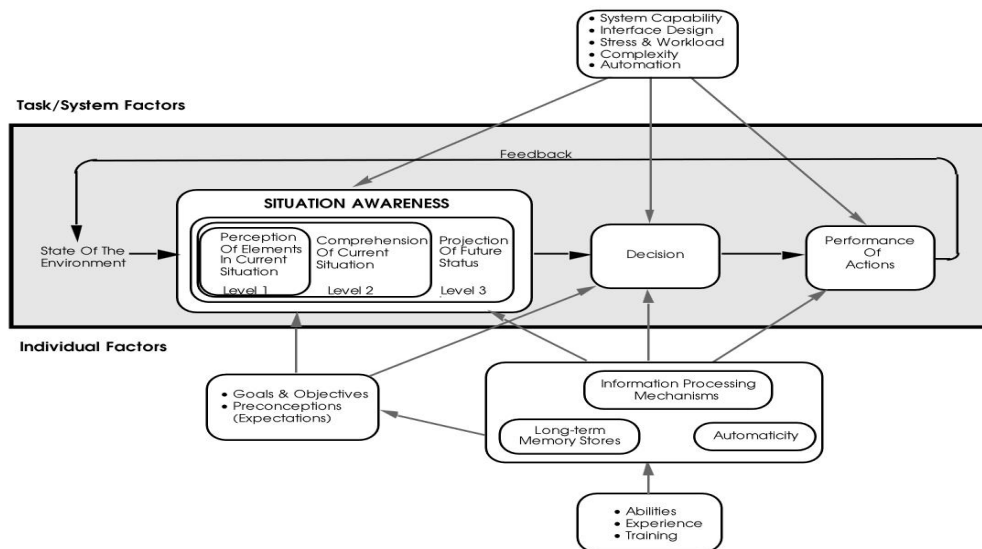


Fig. 2.3 Situation Awareness Theory (SAT) Framework¹⁹⁰.

2.3 Review of Empirical Studies

2.3.1 Awareness of ERMS and Use of ERMS

There is literature on e-records management, but the majority of those studies were conducted in industries, corporations, and other non-university settings^{193, 194}. Nevertheless, the scant research in this area presents a dismal picture of the state of e-records management in universities^{195, 196, 35}.

We also analysed two papers that focused on the higher education industry in Africa. The research revealed certain areas that require improvement while also highlighting certain good advancements regarding the state of e-records. In order to determine how prepared these three Federal universities in Nigeria were to handle electronic records, one of these studies was carried out³⁵. Check lists, oral interviews, and questionnaires

were used to gather data. The results showed that because of inadequate organisational and legal frameworks, Nigerian universities are ill-prepared to handle electronic data. The study also found that, although basic e-records management equipment such as computers, scanners, floppy discs, and scanners were available, more advanced but equally significant systems such as Online Transactional Processing System (OLTPS), Electronic Document Management System (EDMS), and Decision Support System (DSS) were not.

It was impossible for the institutions to keep up a reliable electronic records management system without this equipment. The survey also found that the majority of records management employees lacked formal training in e-records management, and there were no e-records management policies in place. Inadequate facilities for records management, inconsistent file classification practices, the absence of an archival repository and a university archivist, and improper record disposal were among the other issues that were found to be impeding effective e-records management in the universities under investigation. In contrast, the circumstances in federal institutions in Nigeria are similar to those in universities in Malawi¹⁹⁶.

It was discovered that human resource capacity and ICT infrastructure for e-records administration were lacking in public universities in the two nations. An evaluation of the efficacy of electronic records management was the goal of a similar study conducted at Africa University, located in Mutare, Zimbabwe, with a focus on the Southern African Region ¹⁹⁷. The study's conclusions demonstrated that although e-records management rules and procedures were available—a change from what had been seen in public universities in Malawi and Nigeria—the personnel did not always follow them because of inadequate monitoring. If established policies and procedures

are not followed, the organisation may encounter difficulties akin to those that existed in organisations without policies.

The study also revealed that the production of e-record backups was inconsistent, with results showing that 6 (24%) of the respondents produced backups daily, 12 (48%) produced backups weekly, 6 (24%) stated backups were produced monthly, and 4 % stated backups were produced annually. Positively, it was mentioned that Africa University had implemented security measures to protect electronic records. Most significantly, it was found that there were rigorous controls over who could enter the server room. Even if this was the case, it appears that awareness campaigns regarding the security measures in place were not successful, as evidenced by the fact that the majority of respondents (14), or 56%, did not know about them.

The creation of an electronic records management system (ERMS) adoption readiness framework for higher professional education (HPE) institutions in Yemen was the subject of another study reviewed from the Middle East with the intention of assessing the state of e-records management from the higher education sector in other regions¹⁹⁸. The material for this qualitative study came from interviews with twenty experts from Yemeni HPE institutions who work with ERMS. The results showed that in order to effectively promote effective ERMS preparation among Yemeni HPE institutions, a clear ERMS policy, enough IT infrastructure, and implementation of security practices, conducting training of the personnel involved in using and maintaining the system, and allocation of a financial budget to cover the successful implementation of the ERMS.

According to a related empirical study, the main reasons developing countries are unable to address the challenges associated with e-records management are a lack of policy and legislation, standardisation, authenticity, development capacity, physical infrastructure, professionals with experience in record-keeping, and government officials who are unaware that they require e-records management training¹⁹⁴. Unquestionably, ERMS is a critical system; however, in the education sector, HLIs are still unaware of its significance.

According to one study, there is a direct correlation between the degree of ERMS use and the important adoption characteristics. According to this study, the organisational and human elements that have been studied have made a substantial contribution to the development of ERMS¹⁹⁸. The study also found that adoption of ERMS is positively impacted by technological factors. In contrast, records are still maintained physically in underdeveloped nations like South Africa. This makes an ERMS framework necessary in order to assist organisations in developing their information management.

According to a study, creating a balanced scorecard based on objective metrics for user happiness, internal process efficiency, resource usage, individual impact, and usage frequency is essential for assessing the efficacy of the system¹⁹⁹. Informational success level. The system's overall quality, the information it produces, how much it is used, how satisfied users are with it, and how it affects both the person and the organization all affect how effective the system is²⁰⁰. Additionally, a study established a link between organisational traits and system performance. Six categories of criteria were found to be essential for the success of ERMS. These include the following: system-related elements, work environment and culture, training and engagement,

support from upper management, technical preparedness, and training and involvement²⁰¹.

Researchers that looked into the adoption of IS in underdeveloped countries discovered that the few systems that were in place were disjointed and poorly coordinated, which limited the capacity of national governments to use them for information gathering and service delivery²⁰². Particularly suffering from disorganised investments, a shortage of skilled workers, and uncooperative end users is Yemen. Due to these, national plans seen in other nations have been replaced by standard normative techniques for IS implementation (ERMS, for example) in Yemen. In spite of this, workers still need to be informed about the advantages of IS systems and their deployment is still required.

2.3.2 Awareness of ERMS and Security of ERMS

The scope of data authorization through chained access between the issuer and the record user was thoroughly examined. This review was necessary to understand the extent of authorization each party has over the information and to determine the best governance practices. Numerous concerns were raised regarding the integrity and authenticity of digital records and how to assess them based on the behaviors of users and issuers, particularly with sensitive information. The study identified significant challenges related to the use of digital records, especially for individuals who may lack basic education about information privacy and authorization levels. It became clear that digital records are vulnerable to manipulation and tampering, highlighting the need for effective governance to maintain the reliability of both hard copy and digital records, especially in the face of threats such as viruses or other external dangers²⁰³.

Technology has fundamentally altered global practices, prompting discussions about the challenges and opportunities in record management. The shift from physical to electronic records represents a significant transformation. Previous studies have addressed key issues that need to be resolved. Managing draft copies involves considerable manpower costs, while the initial costs of digitizing records can be high, though these costs decrease over time as managing digital records becomes more efficient. Digital records tend to have fewer errors compared to paper records, making digitalization an attractive option for many organizations. Proper record management aims to ensure efficiency, appropriate maintenance, and secure storage²⁰⁴.

However, despite the importance of effective record management systems, the state of record management in many African countries, including Kenya, is lacking. Government-led institutions often experience system failures, with instances of deliberate system disruptions to exploit or misuse records. Examples include deliberate destruction through fire to hide evidence and systemic damage. Many reports highlight the inadequacy and disarray of these systems. There is a need for compliance laws requiring government institutions to proactively capture, record, and manage all records, with central backup storage maintained independently. This would help ensure accountability for the information handled and demonstrate good intentions in record management²⁰⁵.

2.4 Conceptual Model

Independent Variable

Dependent Variables

<p>Use of ERMS</p> <ul style="list-style-type: none"> - Frequency of use of ERMS - Purpose of use of ERMS
--

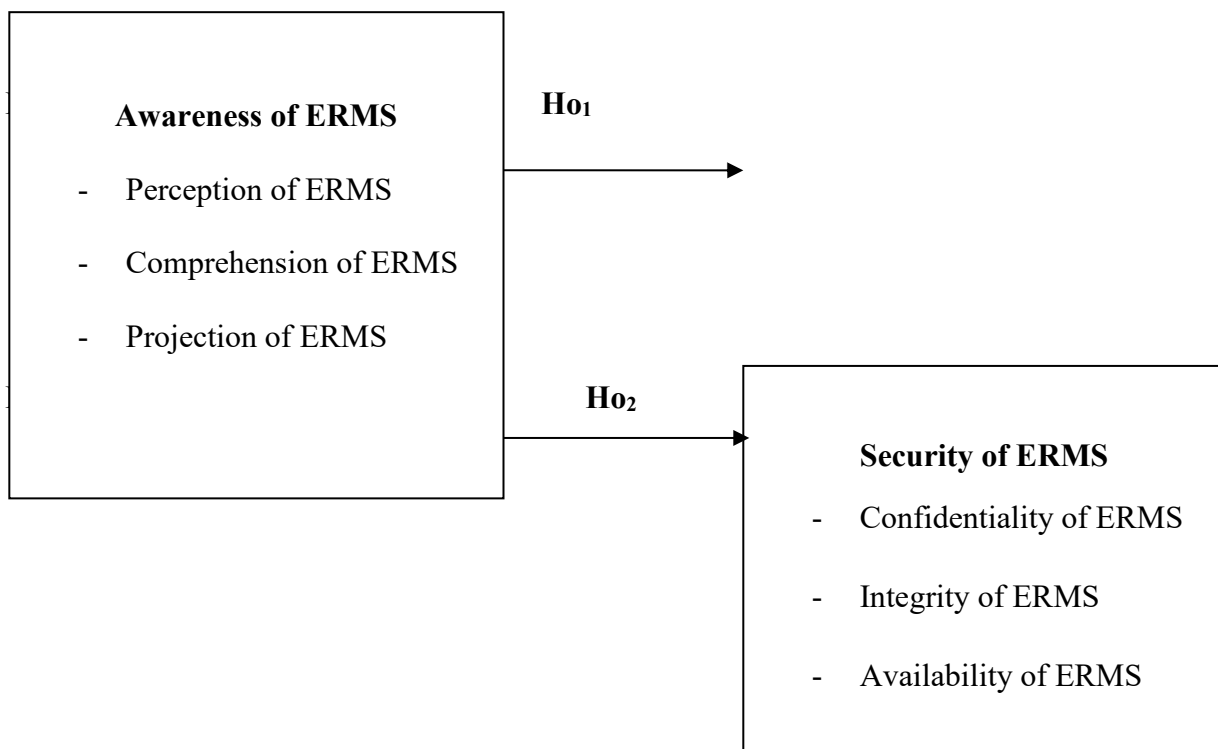


Figure 2.4: Conceptual Model

Source: Researchers' Work, 2023

The above conceptual model shows the proposed influence of the independent (Awareness of Electronic Records Management Systems) and the dependent (Use and security of Electronic Records Management Systems) variables. The model has three variables: Awareness, Use and Security of Electronic Records Management Systems. Use and Security of Electronic Records Management Systems been the dependent variable has the following components: Use of ERMS – the sub metrics are Frequency of use of ERMS, Purpose of use of ERMS, Specific time spent on each use of ERMS. These metrics are gotten from literature. Security of ERMS - the metrics are Confidentiality, Integrity, and Availability. These metrics are gotten from

the Information Security Model^{13, 98}. Awareness of ERMS been the independent variable has sub-measures which includes; Perception, Comprehension and Projection¹⁹⁰. These measures are gotten from the Situation Awareness Theory.

Furthermore, the conceptual model shows that hypothesis one will investigate the influence of Awareness on Use of ERMS. Also, hypothesis two will examine the influence of Awareness on Security of ERMS among administrative staff in Public Polytechnics, Edo State, Nigeria.

2.5 Summary of Gaps in Literature Reviewed

Although there is literature on e-records management, many of those studies were conducted in fields other than universities, including the mainstream civil service, businesses, and other organizations^{193, 194}. The limited studies that have already been conducted in this field, however, offer a bleak image of the condition of e-records management in tertiary institutions^{195, 196, 35}.

One of this study assessed e-records readiness at Karonga District Council (KDC) as one of the local government authorities in Malawi¹⁹³. The study employed a descriptive survey design where a survey questionnaire was used to collect data. Altogether, 56 staff were sampled randomly and purposively. The staff comprised principal officers, records clerks, ICT personnel and other action officers. The study revealed that e-records readiness at KDC was low and evolving as evident by the presence of e-record products and technologies, which were largely inadequate and obsolete. The study also established that there was inadequate and poor adherence to policies, standards and procedures for e-records management practices. Furthermore,

responsibilities fore-records management were not clear. There was no established records management programme.

The rapid pace with which technology is changing continues to pose a perpetual threat to digital preservation¹⁹⁴. Although initiatives in digital preservation in Europe, North America, Asia and sporadic attempts in Africa appear to have yielded some level of progress, permanent access to information and longevity of digital records continue to be a problem. Whilst Africa's contribution to the growth of digital records may be insignificant, it is growing and Ghana cannot be insulated from this threat of digital growth. This paper examines the current challenges of digital preservation in sub-Saharan Africa with particular reference to Ghana. It identified funding, level of security and privacy, skills training and technological obsolescence as factors that pose key threats to digital preservation.

The interrelationships between governance, audit, risk, and record keeping are central to the discipline of records management. This study delves into these connections through a series of case studies conducted at six universities in South Africa and Malawi. These institutions have been experiencing corporatization, which significantly impacts governance, audit, risk management, and record keeping practices. By focusing on higher education institutions in Southern Africa, this study uncovers intriguing patterns and contrasts, leading to innovative conclusions¹⁹⁶.

The study adopts a collective case study approach, utilizing multiple cases to critically examine the interplay between record keeping and governance, audit, and risk. This qualitative research, situated within the interpretive tradition of inquiry, does not aim to prescribe solutions to general record keeping issues. Instead, it seeks to enhance understanding of the challenges and opportunities in managing records and documents

within the realms of governance, audit, and risk. Key questions explored include workplace practices, existing problems, and alternative approaches to address these issues. Findings indicate that some higher education institutions in Southern Africa are leveraging their governance structures and other drivers to establish effective recordkeeping systems. Key governance structures and drivers identified include laws and regulations, governing bodies, audits, risk management frameworks, technology, public sector reforms, and workplace culture. Conversely, other institutions struggle with recordkeeping despite efforts to improve governance systems, primarily due to a lack of recordkeeping capacity²⁰⁶. The influence of big data management on organizational performance, particularly the role of electronic records management systems (ERMS), has been a focal point for scholars. The integration of digital technology, such as ERMS, has led to widespread organizational changes. To support operations and enhance performance, organizations need to implement automation systems. This study employs a quantitative method using the partial least squares structural equation modeling (SEM-PLS) approach. This includes measurement items, respondents' demographics, data sampling and collection, and data analysis. SEM-PLS assesses data through measurement and structural model evaluations.

The study presents an empirically tested model to guide organizations in adopting ERMS, influenced by big data management. Findings specifically address concerns within oil and gas organizations regarding the integration of new technologies to boost performance. Results show that individual user characteristics, combined with administrative features, strongly predict the successful adoption of ERMS. The study demonstrates that the potential of ERMS significantly impacts organizational performance in the oil and gas sector. These findings align with broader theories on

how big data management and ERMS adoption affect organizational readiness for new technologies. Previous research on this topic has predominantly been conducted outside Africa, with only a few studies in Nigeria. Studies examining the influence of awareness on the use and security of ERMS have received limited attention. This study aims to fill this research gap by investigating these concepts among administrative staff in public polytechnics in Edo State, Nigeria.

The study's unique focus on the three interconnected concepts of governance, audit, and risk management, as they relate to record keeping in public polytechnics, highlights the need for effective recordkeeping systems. This is particularly important in the context of Nigerian institutions where system failures and deliberate destruction of records have been noted. Compliance with recordkeeping laws and regulations, supported by independent central backup storage, is essential to ensure accountability and integrity in managing official information.

In conclusion, the study provides valuable insights into the critical relationships between governance, audit, risk, and record keeping. It emphasizes the importance of robust recordkeeping systems supported by effective governance structures to enhance organizational performance and ensure data integrity. By addressing the identified research gaps, particularly in the context of Nigerian public polytechnics, this study contributes to the broader understanding of the role of electronic records management systems in modern organizational environments.

Endnotes

1. International Council on Archives (ICA). *Electronic Records: A Workbook for Archivists (ICA Study 16)*, Paris: International Council on Archives, 2005.
2. E., Metto, M., Mwita, & N. K., Benson. *A Study of the Management of Student Records in Academic Registrars' Offices in Kenyan Universities*, ***African Journal of Empirical Research***, 3(1), 2022, 68–77. <https://doi.org/10.51867/ajernet3.1.8>
3. A. L., Abdullah, Mohammad Z., Yusof, & U. A. Mokhtar, *Factors influencing the Implementation of Electronic Records and Information Management: A Case Study in Military Service in Malaysia*. ***Records Management Journal***, 30(1), 2020, 81-99.
4. V.M., Falolo, K.T., Capillas, N.A., Vergarra, & A.F., Cerbito. *Student Registration and Records Management Services towards Digitization*, ***International Journal of Educational Management and Development Studies***, 3(1), 2022, 149-165.
5. C. M., Ambira, H. M., Kemoni, & P., Ngulube. *A framework for electronic records management in support of e-government in Kenya*, ***Records Management Journal***, 29(3), 2019, 305-319.
6. T. M., Moalthodi, & T., Kalusopa. *Assessment of e-records readiness at the Ministry of Labour and Home Affairs, Gaborone, Botswana*, ***Mousaion***, 34(3), 2016, 1-22.
7. S., Mutsagondo, & P., Ngulube. *Skills Impact Assessment of Personnel Managing Electronic Records in Zimbabwe's Public Service*, ***Mousaion: South African Journal of Information Studies***, 36, 2019. <https://doi.org/10.25159/2663-659X/3283>
8. E., Shepherd. *Tradition and Position in England*, in N. Butikofer, H. Hofman and S. Ross (eds), *Managing and Archiving Records in the Digital Era*, 2016.
9. Ö. Semanur. *Usability of Electronic Records Management System (ERMS) of the Turkish Public Universities*, ***TürkKütüphaneciliği***, 33(4), 2019, 282-295. <https://doi.org/10.24146/tk.576165>

10. P.C., Verhoef, T., Broekhuizen, Y., Bart, A., Bhattacharya, J., Qi Dong, N., Fabian, & M., Haenlein. *Digital Transformation: A Multidisciplinary Reflection and Research Agenda*, **Journal of Business Research**, 122, 2021, 889-901.
11. S., Papagiannidis, & D., Marikyan. *Smart offices: A Productivity and Well-being Perspective*, **International Journal of Information Management**, 51, 2019, 102-127.
12. F. D., Davis. *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*, **Management Information Systems Quarterly**, 13(3), 1989, 319–340. doi:10.2307/249008
13. V., Venkatesh, M. G., Morris, G. B., Davis, & F. D., Davis. *User Acceptance of Information Technology: Toward a Unified View*, **MIS Quarterly**, 27(3), 2003, 425–478. doi:10.2307/30036540. JSTOR 30036540. S2CID 14435677.
14. R., Touray. *A Review of Records Management in Organizations*, **Open Access Library Journal**, 8(1), 2021, 1-23. DOI: 10.4236/oalib.1108107.
15. T., Fuzea. *Public Records and Archives as Tools for Good Governance: Reflections within the Recordkeeping Scholarly and Practitioner Communities*, **ESARBICA Journal**, 26, 2015, 3-23.
16. M., Tayefi, P., Ngo, T., Chomutare, H., Dalianis, E., Salvi, A., Budrionis, & F. Godtlielsen, *Challenges and Opportunities beyond Structured Data in Analysis of Electronic Health Records*. **Wiley Interdisciplinary Reviews: Computational Statistics**, 13(6), 2021, e1549.
17. O., Mosweu, & D., Rakemane. *The Role of Records Management in Ensuring Good Governance in Africa: Impediments and Solutions*, **Journal of the South African Society of Archivists**, 53(1), 2020, 103-123. <https://doi.org/10.4314/jsasa.v53i1.8>
18. V. W., Tsabedze. *Managing Electronic Records in Higher Education Institutions*, In book: *Management Training Programs in Higher Education for the Fourth Industrial Revolution*, 2020, 36-61.
19. M., Mukred, & Z. M., Yusof. *The Performance of Educational Institutions Through the Electronic Records Management Systems: Factors Influencing Electronic Records Management System Adoption*, **International Journal of Information Technology Project Management**, 9(3), 2018, 34-49.
20. B., Hawash, U. A., Mokhtar, Z. M., Yusof, M., Mukred, & W., Ali. *Intention to Adopt Electronic Records Management System in the Oil and Gas Sector in Yemen*, **International Journal of Advanced Trends in Computer Science and Engineering**, 9(5) 2020, 6959-6971.

21. B. I., Taiwo. *Electronic Records Management Implementation: Factors Affecting Organizational Readiness*, **Information and Knowledge Management**, 9(6), 2019, 1-14.
22. S., Katuu. *Enterprise Content Management (ECM) Implementation in South Africa*, **Records Management Journal**, 22(1), 2012, 37-56. DOI:10.1108/09565691211222081
23. C. A., de Mingo, & A., Cerrillo-i-Martínez. *Improving Records Management to Promote Transparency and Prevent Corruption*, **International Journal of Information Management**, 38(1), 2018, 256-261.
24. S., Katuu, & M., Ngoepe. *Managing Digital Records in a South African Public Sector Institution*, INFUTURE2015: e-Institutions – Openness, Accessibility, and Preservation, Zagreb, Croatia, 2015.
25. O., Mosweu, K., Bwalya, & A., Mutshewa. *Examining Factors Affecting the Adoption and Usage of Document Workflow Management System (DWMS) using the UTAUT model Case of Botswana*, **Records Management Journal**, 26(1), 2016, 38-67. <http://dx.doi.org/10.1108/RMJ-03-2015-0012>
26. L. T., Nguyen, P. M., Swatman, & B., Fraunholz. *EDMS, ERMS, ECMS or EDRMS: fighting Through the Acronyms towards a Strategy for Effective Corporate Records Management*, Paper presented at the 18th Australasian Conference on Information Systems, Toowoomba, 2007. <http://dro.deakin.edu.au/eserv/DU:30008058/fraunholz-edmsermsecms-2007.pdf>
27. J. A., Alalwan, & H. R., Weistroffer. *Enterprise Content Management Research: A Comprehensive Review*, **Journal of Enterprise Information Management**, 25(5), 2021, 441-461.
28. M., Mohamad, A. T., Kamareenna, N. H., Rosely, & S. R., Sakarji. *Evolution of E-records Management Practices in E-government: A Malaysian Perspective*, **International Journal of Academic Research in Business and Social Sciences**, 13(8), 2023, 156-170. DOI:10.6007/IJARBS/v13-i8/17455
29. S., Katuu. *Enterprise Content Management Implementation: An Overview of Phases, Standards and best practice guidelines*, **Information World/Bilgi Dunyasi**, 13(2), 2021b, 457-476.
30. S., Katuu. *Assessing the Functionality of the Enterprise Content Management Maturity Model*, **Records Management Journal**, 26(2), 2016a, 218-238.
31. R. F., Smallwood. *Managing Electronic Records: Methods, Best Practices, and Technologies*, Wiley, Hoboken, NJ, 2020.

32. P.C., Franks. *Records and Information Management*, American Library Association, Chicago, 2014.
33. I. M., Nofal, & Z. M., Yusof. *Taxonomy Framework of ERP Success Usage in SMEs in Middle East Region*, *Journal of Theoretical & Applied Information Technology*, 86(3), 2018, 845-860.
34. A., Adade, A.Y., Quashigah, & P., Eshun. *Academic Records Management in Ghanaian Basic Schools: A Study of Basic Schools in the AshieduKeteke Sub-Metroin the Greater Accra Region*, *British Journal of Education*, 6(4), 2018, 33–49.
35. W., Benti, C. L., Liew, & B., Chawner. *The Management and the Usage of Electronic Resources in Academic Libraries: A Bi-directional Relationship*, **Information Development**, 38(1), 2022, 114-124. <https://doi.org/10.1177/0266666920983600>
36. M., Mukred, Zawiyah M. Yusof & Fahad M. Alotaibi. *Guaranteeing the Productivity of Higher Learning Institutions through Electronic Records Management System (ERMS)*, **IEEE Access**, 20, 2017, 1-23. DOI 10.1109/ACCESS.2019.2927614
37. N., Mnjama. *The Records Management Paradigm Shift: Problems and Prospects in East and Southern Africa*, In *Concepts and Advances in Information Knowledge Management*, Chandos Publishing, 2014, 49-71.
38. O., Clemence, I., Luambano, & K., Mwantimwa. *Adoption and Application of Electronic Records Systems in Higher Learning Institutions*, **Information Development**, 2(1), 2023, 96-117. DOI:10.1177/02666669231158336
39. V. K., Verma, & A. R., Nair. *Implementation of Electronic Resource Management System: A Case Study of Central Library, IIT Delhi*, **Journal of Information and Knowledge**, 60(3), 2023, 191-197.
40. A. H., Chaputula, *E-records Management Practices in Public Universities: A Developing Country Perspective*, **Records Management Journal**, 32(3), 2022, 213-230. <https://doi.org/10.1108/RMJ-06-2021-0027>
41. F., Mahmood, A. Z., Khan, & R. H. Bokhari, *ERP Issues and Challenges: A Research Synthesis*. **Kybernetes**, 49(3), 2020, 629-659.
42. S., Johnston, & M., Bowen. *The benefits of Electronic Records Management Systems: a General Review of Published and some Unpublished Cases*, **Records Management Journal**, 15(3), 2015, 131-140.

43. M. M., Komba. *Factors Influencing Access to Electronic Government Information Ande-Government Adoption in Selected Districts of Tanzania*, Doctoral thesis, University of South Africa (UNISA), 2019.
44. C., Gaglio, E., Kraemer-Mbula, &E., Lorenz. *The Effects of Digital Transformation on Innovation and Productivity: Firm-level Evidence of South African Manufacturing Micro and Small Enterprises*, **Technological Forecasting and Social Change**, 182,2022, 121785. <https://doi.org/10.1016/j.techfore.2022.121785>
45. M. E., Hassanin, &M. A.,Hamada. *A Big Data Strategy to Reinforce Self-sustainability for Pharmaceutical Companies in the Digital Transformation Era: A Case Study of Egyptian Pharmaceutical Companies*, **African Journal of Science, Technology, Innovation and Development**, 14(7),2022, 1870–1882. <https://doi.org/10.1080/20421338.2021.1988409>
46. A., Gandomi, &M.,Haider. *Beyond the Hype: Big Data Concepts, Methods, and Analytics*, **International Journal of Information Management**, 35(2), 2015, 137–144. <https://doi.org/10.1016/j.ijinfomgt.2014.10.007>
47. F. H., Semantha, S.,Azam, B., Shanmugam, K. C., Yeo, &A. R., Beeravolu. *A Conceptual Framework to ensure Privacy in Patient Record Management System*, **IEEE Access**, 9, 2021, 165667–165689. <https://doi.org/10.1109/ACCESS.2021.3134873>
48. B.,Hawash, Y. I., Abuzawayda, U. A., Mokhtar, Z.,Yusef, &M., Mukred. *Digital Transformation in the Oil and Gas Sector during Covid-19 Pandemic*, **International Journal of Management**, 11(12),2020, 725–735. <https://doi.org/10.34218/IJM.11.12.2020.067>
49. B., Hawash, U. A., Mokhtar, Z. M., Yusof, &M., Mukred. *The Adoption of Electronic Records Management System (ERMS) in the Yemeni Oil and Gas Sector: Influencing Factors*, **Records Management Journal**, 30(1), 2020, 1–22. <https://doi.org/10.1108/RMJ-03-2019-0010>
50. B., Hawash, U. A., Mokhtar, Z. M., Yusof, &M., Mukred. *Enhancing Business Continuity in the Oil and Gas Industry through Electronic Records Management System Usage to improve Off-site Working: A Narrative Review*, **Journal of Information Science Theory and Practice**, 10(2),2022, 30–44. <https://doi.org/10.1633/JISTaP.2022.10.2.3>
51. Y., Wang, S., Cheng, F., Zhang, N., Feng, L., Li, X., Shen, J., Li, &H., Yu. *Big Data Technique in the Reservoir Parameters' Prediction and Productivity Evaluation: A Field Case in Western South China Sea*, **Gondwana Research**, 96, 2021, 22–36. <https://doi.org/10.1016/j.gr.2021.03.015>

52. J., Zhang, Q., Wang, Y., Pan, & X., Liu. *Research on Archives Information Management System based on Computer Big Data*, Proceedings of the IEEE International Conference on Power Electronics, Computer Applications, 2021, 729–732. <https://doi.org/10.1109/ICPECA51329.2021.9362505>
53. M. Mukred, Z. M., Yusof, U. A., Mokhtar, & N. A., Manap. *Electronic Records Management System Adoption Readiness Framework for Higher Professional Education Institutions in Yemen*, **International Journal on Advanced Science, Engineering and Information Technology**, 6(6), 2016, 804-811.
54. M., Mukred, Z. M., Yusof, N. A. B. M., Noor, B. K., Kayode, & R., Al-Duais. *The Role of Cloud Electronic Records Management System (ERMS) Technology in the Competency of Educational Institutions*, In F. Saeed, F. Mohammed, & N. Gazem (Eds.), *Emerging trends in intelligent computing and informatics*, 2019, 936–946. Springer. https://doi.org/10.1007/978-3-030-33582-3_88
55. K. A., Wahid, M. M., Marzuki, M. R. M., Rosman, & M. Z. M., Zawawi. *The Effectiveness of Electronic Risk Management System (ERMS): A Study in Malaysian Higher Learning Institution*, **ABAC Journal**, 42(4), 2022, 153–167. <https://doi.org/10.14456/abacj.2022.58>
56. S., Karunagaran, S. K., Mathew, & F., Lehner. *Differential Cloud Adoption: A Comparative Case Study of Large Enterprises and SMEs in Germany*, *Information Systems Frontiers*, 21(4), 2019, 861–875.
57. M., Mohammadpoor, & F., Torabi. *Big Data Analytics in Oil and Gas Industry: An Emerging Trend*, **Petroleum**, 6(4), 2020, 321–328. <https://doi.org/10.1016/j.petlm.2018.11.001>
58. T., Nguyen, R. G., Gosine, & P., Warriar. *A Systematic Review of Big Data Analytics for Oil and Gas Industry 4.0.*, **IEEE Access**, 8, 2020, 61183–61201. <https://doi.org/10.1109/ACCESS.2020.2979678>
59. S. M., Ngoako. *Records Management in Support of Service Delivery in the Public HEALTH SECTOR of the Limpopo Province in South Africa*, Unpublished Masters' Thesis, University of South Africa, 2011.
60. U. C., Lawrence. *Computer Made Easy*, Nkpor: Sir Law Publishing Co., 2010.
61. A.S., Okwudili, & N.G., Anigbogu. *Introduction to the Fundamental of Computer Science*, Awka: Cheston Agency Ltd., 2010.
62. R.S., Tilton, & S., Rigby. *The Electronic Office: Procedures and Administration*, New York: South-western Educational, 2014.

63. O., Effy. *Management Information System*, Canada: Course Technology Ltd., (3rd Ed), 2012.
64. C.M., Ile, & D. R., Ojohwhoh. *Extent of Adoption of Electronic Records Protection Practices in Polytechnics in Edo and Delta States*, **ISJASSR**, 2(4), 2020, 40-48. ISSN: 2507 -1528.
65. M. J., Earl. *Experience in Strategic Information Systems Planning*, **MIS Quarterly**, 2013, 1–21.
66. P. F., Drucker. *The New Society of Organizations*, **Harvard Business Review**, 70(5), 2012, 95–104.
67. R. L., Nolan. *Information Technology Management from 1960–2000*, Harvard Business School, Boston, 2001.
68. V., Grover, J.T., Teng, & K.D., Fiedler. *Information technology enabled business process redesign: an integrated planning framework*, **Omega**, 21(4), 1993, 34-51.
69. A. N. B., Bahri, W. M. I. Z. B., Wan, M. H. B., Aris, N. F. B. M., Azaham, & W. N. S. W. Hashim, *Issues and Challenges in Record Management: The Adoption of ERMS*. **International Journal of Accounting, Finance and Business**, 7(42). 2022
70. A. N., Bahri, W. M., Wan Jaaffar, M. H., Aris, N. F., MohdAzaham, & W. N., Wan Hashim. *Issues and Challenges in Record Management: The Adoption of ERMS*, **International Journal of Accounting, Finance and Business (IJAFB)**, 7(42), 2022, 214 - 219.
71. I., Nonaka, & D. J., Teece. *Research Directions for Knowledge Management*, in Nonaka, I. and Teece, D.J. (Eds.): *Managing Industrial Knowledge: Creation, Transfer and Utilization*, SAGE, Londres, 2021, 330–335.
72. M. K. I., Kassab, S. S., Abu Naser, & M. J., Al Shobaki. *An Analytical Study of the Reality of Electronic Documents and Electronic Archiving in the Management of Electronic Documents in the Palestinian Pension Agency (PPA)*, **European Academic Research**, 4(12), 2017, 10052-10102.
73. D. M., Coraiola, W. M., Foster, S., Mena, H., Foroughi, & J. Rintamäki, *Ecologies of Memories: Memory Work within and between Organizations and Communities*. **Academy of Management Annals**, 17(1), 2023, 373-404.
74. A., Marwick. *Knowledge Management Technology*, **IBM Systems Journal**, 40(4), 2021, 814–830.

75. ERMG. *Electronic Records Management Guidelines: Electronic Document Management Systems*, State Archives Department, Minnesota Historical Society, Version 4, 2004a.
76. MoReqModel *Requirements for the Management of Electronic Records*, IDA Programme of the European Commission by Cornwell Management Consultants Plc., 2001.
77. ISO 15489-1. *Information and Documentation, Records Management, Part 1: General*, International Standard Organization, (Geneva, Switzerland: ISO, 2001).
78. J.A., O'Brien, & Marakas, *Management Information Systems*, McGraw-Hill/Irwin, 7th ed., ISBN-10: 007293588X.2017
79. M.J.D. Sutton, *Document Management for the Enterprise: Techniques and Applications*, John Wiley & Sons, Inc., New York.2016
80. ISO/IEC 17799. *Information Technology: Code of Practice for Information Security Management*, International Standard Organization, 2000.
81. T. Cox,. *Closing an Era: Historical Perspectives on Modern Archives and Records Management* 2013, No. 35.Greenwood Publishing Group.
82. Association of Information and Image Management. *What is Information Management*, 2018. Available at: www.aiim.org/what
83. A. O., Oyedokun. *Records and Information Management Awareness Foundation*, RIMA Foundation 2012, Available at president@rimaw.org
84. A. S. Hornby, *Oxford Learners Dictionary*, Oxford University Press; New York, 2004.
85. M E, Oliverio W R Pasewark & B R, White *The Office, Procedures and Technology*, South-Western Educational Publishing; New York, 2015, p. 545-547.
86. Australia, National Archives of Australia. *Digital Recordkeeping: Guidelines for Creating, Managing and Preserving Digital Records*, 2004, <http://www.naa.gov.au/records-management/publications/Digital-recordkeeping-guidelines.aspx> Accessed 9th January 2014
87. I., Moseti. *Digital preservation and institutional repositories: Case study of universities in Kenya*, **J. South Afr. Soc. Archivists**, 49, 2016, 137–154.
88. B. E., Iwhiwhu. *Management of records in Nigerian universities: Problems and Prospects*, *The Electronic Library* 23(3), 2015, 345-355. DOI:10.1108/02640470510603741

89. S. M., Keakopa. *Management of Electronic Mail: A Challenge for Archivists and Records Managers in Botswana, Namibia and South Africa*, Paper presented at the XIX Bi-Annual East and Southern Africa Regional Branch of the International Council on archives (ESARBICA) General Conference on Empowering Society with Information: The Role of Archives and Records as Tools of Accountability, June 18-22, 2017, Dar es Salaam, Tanzania.
90. C. T., Nengomasha. *Managing Public Sector Records in Namibia: a proposed model*. *Information Development*, 25(2), 2019, 112–126. doi:10.1177/0266666909104712
91. M., Curry, B., Marshall, R. E., Crossler, & J., Correia. *InfoSec Process Action Model (IPAM): Systematically Addressing Individual Security Behavior*, ACM SIGMIS Database: **The Database for Advances in Information Systems**, 49(SI), 2018, 49–66. doi:10.1145/3210530.3210535. ISSN 0095-0033. S2CID 14003960.
92. C., Joshi, & U. K., Singh. *Information Security Risks Management Framework – A Step Towards Mitigating Security Risks in University Network*, **Journal of Information Security and Applications**, 35, 2017, 128–137. doi:10.1016/j.jisa.2017.06.006. ISSN 2214-2126.
93. M., Fletcher. *An Introduction to Information Risk*, The National Archives, 2016.
94. SANS Institute. Information Security Resources, www.sans.org 2016.
95. D., Kent, & T., Sheridan. *Market Reactions to Tangible and Intangible Information*, **The Journal of Finance**, 61(4), 2006, 1605–1643. doi:10.1111/j.1540-6261.2006.00884.x. SSRN 414701.
96. T., Keyser. Security Policy, *The Information Governance Toolkit*, **CRC Press**, 2018, 57–62. doi:10.1201/9781315385488-13, ISBN 978-1-315-38548-8
97. C., Perrin. *The CIA Triad*, 2008.
98. R., Sandhu, & J., Sushil. Relational Database Security, *Information Security Management Handbook, Four Volume Set*, Auerbach Publications, 2020. doi:10.1201/9780203325438.ch120, ISBN 978-0-8493-1068-3
99. K., Beckers. *Pattern and Security Requirements: Engineering-Based Establishment of Security Standards*, **Springer**, 2015, 100. ISBN 9783319166643.
100. Springer Reference. *Data Privacy and Confidentiality*, Berlin/Heidelberg: Springer-Verlag, 2011, doi:10.1007/springerreference_205286
101. J., Andress. *The Basics of Information Security: Understanding the Fundamentals of InfoSec in Theory and Practice*, **Syngress**, 2014, 240. ISBN 9780128008126.

102. J. E., Boritz. *IS Practitioners' Views on Core Concepts of Information Integrity*, **International Journal of Accounting Information Systems Elsevier**, 6(4), 2005, 260–279. doi:10.1016/j.accinf.2005.07.001.
103. I., Hryshko. *Unauthorized Occupation of Land and Unauthorized Construction: Concepts and Types of Tactical Means of Investigation*, **International Humanitarian University Herald Jurisprudence**, 43, 2020, 180–184. doi:10.32841/2307-1745.2020.43.40. ISSN 2307-1745.
104. K., Bonn-Oh. *Referential Integrity for Database Design, High-Performance Web Databases*, **Auerbach Publications**, 2020, 427–434, doi:10.1201/9781420031560-34, ISBN 978-0-429-11600-1
105. V., Pevnev. *Model Threats and Ensure the Integrity of Information*, **Systems and Technologies**, 2(56), 2018, 80–95. doi:10.32836/2521-6643-2018.2-56.6. ISSN 2521-6643.
106. F., Lejun, W., Yuanzhuo, C., Xueqi, L., Jinming, & J., Shuyuan. *Privacy Theft Malware Multi-Process Collaboration Analysis*, **Security and Communication Networks**, 8(1), 2013, 51–67. doi:10.1002/sec.705. ISSN 1939-0114.
107. D., Blum. *Identify and Align Security-Related Roles, Rational Cybersecurity for Business*, Berkeley, CA: Apress, 2020, 31–60, doi:10.1007/978-1-4842-5952-8_2, ISBN 978-1-4842-5951-1, S2CID 226626983
108. G., Loukas, & G., Oke. *Protection Against Denial-of-Service Attacks: A Survey*, **Computer Journal**, 53(7), 2020, 1020–1037. doi:10.1093/comjnl/bxp078.
109. M., Ohta, & F., Takeo. *Iterative cooperative sensing on shared primary spectrum for improving sensing ability*, 2011 IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN), IEEE, 2011, 623–627. doi:10.1109/dyspan.2011.5936257. ISBN 978-1-4577-0177-1. S2CID 15119653
110. S. O., Popoola. *Records survey and security of public records. Paper presented at National Training Workshop on Records Management organized by the Office of Civil Service of the Federation, Establishment and Pensions Office for Desk/Schedule Officers on (GL. 12-14) in Nigerian Public Service, Ijaiye-Ogba, Ikeja, Lagos, 25-30 September, 2000.*
111. International Foundation for Information Technology, Definition of records, 2010. <http://www.if4it.com>.
112. M. F., Robek. *Records and Information Resource Management in Public Service: A Theoretical and Practical Framework*. Lagos: Administrative Staff College of Nigeria (ASCON), 1995.

113. W. Saffady, *Records and Information Management: Fundamentals of Professional Practice*. Rowman & Littlefield. 2021
114. M. K., Dawha, &Biu, A. B. *Archive and Records Management in a Typical Municipal Council in Nigeria*. *New Library World*, 94(4), 1993, 1108.
115. P. U., Akor, &Udensi, J. *An assessment of Record Management System in Establishment Division of Two Universities in Nigeria*, **Mediterranean Journal of Social Sciences**, 4(12), 2018, 97-109.
116. M. E., Matlala, & A. R. Maphoto, *Application of the Records Life-Cycle and Records Continuum Models in Organizations in the 21 St Century*. **Esarbica Journal**, 39(1). 2020
117. S. A., Ogunrombi, H. M., Abare, & Adamu, D. B. *Problem Records Book: A Tool for Effective Library Management in Nigeria university libraries*, **Library Bulletin: Nigerian University Library System**, 3(1&2), 1998, 101-109.
118. S. O., Popoola. *Records Management System in the Civil Service of Oyo State, Nigeria: A cost Model Approach*, (Ph.D. thesis, University of Ibadan, Ibadan), 2000.
119. C. M., Dollar. *Authentic Electronic Records Strategies for Long-term Access*, Chicago, IL: Cohasset Associates, 23, 2000, 47-50.
120. E. M., Ette. *The Organisation and Utilization of the Ibadan Archives*, (Unpublished Master's thesis, University of Ibadan, Ibadan), 1984.
121. G. O., Alegbeleye. *Archives Administration and Records Management in Nigeria: Up the Decade from Amalgamation*, **ARMA Records Management Quarterly**, 1988, 26-30.
122. T., Rafoneke, & N. Mnjama, *Records Management Practices at the National University of Lesotho*. **ESARBICA Journal: Journal of the Eastern and Southern Africa Regional Branch of the International Council on Archives**, 38, 2019, 157-193.
123. E. O., Unuigbe. *The Future of Records Management in Nigeria*, **Nigerian Archives**, 2(3), 2000, 26-33.
124. C., Mark. *Records and Information Resource Management in Public Service: A Theoretical and Practical Framework*, Lagos: Administrative Staff College of Nigeria (ASCON), 2001.
125. D., Luyombya, & S. Ndagire, *Records Management Procedures and Service Delivery in Private Universities: A Case Study of the Islamic University in Uganda*. **Journal of the South African Society of Archivists**, 53, 2020, 1-19.

126. N. Giba-Fosu, *Records Management Programs in Higher Learning Institution: Case Study of Nelson Mandela Drive Campus Walter Sisulu University, South Africa*. **International Journal of Community Development and Management Studies**, 4, 2020, 023-039.
127. E. J., Egwunyenga. *Records Keeping in Universities: Associated Problems and Management Options in South West Geo-political Zone of Nigeria*, **International Journal of Education Science, Kamla-Raj**, 11(2), 2019, 109-113.
128. M. F., Robeck, G. F., Brown, & Stephens, D. O. *Information and Records Management: Document-based Information Systems*(4th ed.). New York: McGraw-Hill, 2002, 5-6.
129. D., Oguiche, & A. Aliyu, *Towards a National Framework for Digital Preservation in Nigeria: Technologies and Best Practices*. **Information Impact: Journal of Information and Knowledge Management**, 11(4), 2020, 146-155.
130. National Archive of Scotland, *Records Management*. 2013 Retrieved from <http://www.nas.gov.uk/recordKeeping/recordsManagement.asp>
131. International Records Management Trust (IRMT) . *Evidence-based Government in the Electronic Age: Case Summaries*. 2003. <http://www.irmt.org/evidence/index.html>
132. H. N., Kemoni. *Records Management Practices and Public Service Delivery in Kenya*, (Ph.D. thesis, University of KwaZulu-Natal, Pietermaritzburg, South Africa), 2017.
133. T., Kalusopa. *Developing an E-records Readiness Framework for Labour Organizations in Botswana*, (Ph.D. Thesis, University of South Africa, Pretoria), 2019.
134. G., Kanyenze, K., Kondo, & Martens, J. *The Search for Sustainable Human Development in Southern Africa*, Harare: AN, 2016.
135. C., Turney, D., Robinson, M., Lee, & A., Soutar. *Using Technology to Direct Learning in Higher Education: The Way Forward?*, **Active Learning in Higher Education**, 10, 2019, 71-83.
136. D., Uerz, M., Volman, & M., Kral. *Teacher Educators' Competences in Fostering Student Teachers' Proficiency in Teaching and Learning with Technology: An Overview of Relevant Research Literature*, **Teaching and Teacher Education**, 70, 2018, 12-23.

137. B., Hawash, U. A., Mokhtar, & M. Z., Yusof. *The Primarily study of Electronic Records Management System (ERMS) for Yemen Oil and Gas Corporation (YOGC) Subsidiaries*, in Proc. of 2019 International Conference on Cybersecurity (ICoCSec), 2019, 13-19.
138. A. E., Nwaomah. *Records Information Management Practices: A Study on a Faith Based University*, **International Journal for Innovation Education and Research**, 5(11), 2017, 87- 102.
139. M. Mukred, Z. M. Yusof, F. M. Alotaibi, U. A. Mokhtar, & F. Fauzi. *The Key Factors in Adopting an Electronic Records Management System (ERMS) in the Educational Sector: A UTAUT-Based Framework*, **IEEE Access**, 7, 2019, 35963-35980.
140. M., Mukred, Z. M., Yusof, & F. M., Alotaibi. *Ensuring the Productivity of Higher Learning Institutions Through Electronic Records Management System (ERMS)*, **IEEE Access**, 7, 2019, 97343-97364.
141. S. K., Sharma. *Adoption of e-government Services: The Role of Service Quality Dimensions and Demographic Variables*, *Transforming Government: People, Process and Policy*, 9(2), 2015, 207-222.
142. A. A., Aziz, Z. M., Yusof, U. A., Mokhtar, & D. I., Jambari. *Establishing Policy for the Implementation of Electronic Document and Records Management System in Public Sector in Malaysia: The Influencing Factors*, **Advanced Science Letters**, 23(11), 2017, 10732-10736.
143. M. B., Muhenda, & E. K., Lwanga. *Managing Records in Higher Education Institutions in Uganda: Can Human Resource Policies Salvage the Situation?*, **World Journal of Social Sciences**, 2(2), 2012, 74-83.
144. J. R., Baron & A., Thurston. *What Lessons can be Learned From the US Archivist's Digital Mandate for 2019 And Is There Potential For Applying them in Lower Resource Countries?*, **Records Management Journal**, 26(2), 2016.
145. R., Singh, & S. Ramdeo, *Employee Motivation in a Changing Environment. In Contemporary Perspectives in Human Resource Management and Organizational Behavior: Research Overviews and Gaps to Advance Interrelated Fields Cham: Springer International Publishing.* 2023, 191-208.
146. X. P., Coetzer. *The Status of Records Management at the University of Zululand, KwaZulu-Natal*: University of Zululand, 2012.
147. T. M., Moatlhodi. *An Assessment of E-records Readiness at the Ministry of Labour and Home Affairs Headquarters in Botswana, Gaborone*: University of Botswana, 2015.

148. P. M., Sebina, & Zulu, S. F. *Botswana's E-government Programme: The Case for a Multi-stakeholder E-trust Model*, In P. M. Sebina, K. H. Moahi, & K. J. Bwalya, *Digital Access and E-government: Perspectives from Developing and Emerging Countries*, Hershey: Information Science Reference, 2019, 211-234.
149. S. F., Zulu, P. M., Sebina, B., Grand, & Mutula, S. M. *Benchmarking Botswana's E-government Initiatives with WSIS Principles: A Review of Progress and Challenges*, In K. J. Bwalya, & S. F. Zulu, *Handbook of Research on E-Government in Emerging Economies: Adoption, E-Participation, and Legal Frameworks*, Hershey: Information Science Reference, 2018, 237-262.
150. L., Shonhe, & B., Grand. *Implementation of Electronic Records Management Systems*, **Records Management Journal**, 2019, ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/RMJ-03-2019-0013>
151. J., Sim. *Guideline on implementing an EDRMS*, Elanora: Records Solutions, 2010.
152. T. M., Boikhutso. *Change Management; The Impact on Systems Implementation: A Business Application Solution Centre (BASC) case Study*, Pretoria: University of South Africa, 2018.
153. E., Sandin, & N., Akaslompolo. *The Use of Communication in Organizations Undergoing Change: Case Studies of Minelco and SGT AB*. Luleå: Luleå University of Technology, 2019.
154. R., Packery. *Change Management and Communication: Factors Influencing the Successful Communication of Change at a Workplace*, Cape Town: Cape Peninsula University of Technology, 2014.
155. J. R., Kuntz, & J. F., Gomes. *Transformational Change in Organizations: A Self-regulation Approach*, **Journal of Organizational Change Management**, 25(1), 2021, 143-162.
156. M., Sheikh. *The Role of Communication in Change Management: A Case Study on the Merger of Boreda and Värderingsdata*, Gothenburg: University of Gothenburg, 2019.
157. A. L., Harp. *Effective Change Communication in the Workplace*, Knoxville: University of Tennessee, 2011. http://trace.tennessee.edu/utk_gradthes/975
158. M., Ruissalo. *Communications as Change Management Vehicles: How to Improve Change Receptivity with Organizational Communications*, Tampere: Tampere University of Applied Sciences, 2015.

159. O., Al-Jaradat, M., Nagresh, A., Al-Shegran, & Jadallah, N. *Impact of Change Management on the Performance of Employees in University Libraries in Jordan*, **European Journal of Business and Management**, 5(2), 2019, 169-178.
160. A., Nassazi. *Effects of Training on Employee Performance: Evidence from Uganda*, Vaasa: Vaasanammattikorkeakoulu VAMK, University of Applied Sciences, 2018.
161. C. T., Mi. *Managing Change Case Study: HAMK University of Applied Sciences, Valkeakoski, Hämeenlinna*: HAMK University of Applied Sciences, 2012.
162. M., Sidikova. *The Impact of Change on Employees' Motivation: Case Study - CSSC (Cargotec Shared Service Center)*, Turku: Turku University of Applied Sciences, 2011.
163. S., Guler. *Change Management: A Case Study of SAP Implementation in a Major Company*, Göteborg: Chalmers University of Technology, 2020.
164. D. R., Compeau, & C.A., Higgins. *Application of Social Cognitive Theory to Training for Computer Skills*, **Information Systems Research**, 16(2), 2017, 118-143.
165. D. L., Goodhue. *Understanding User Evaluations of Information Systems*, **Management Science**, 41(12), 2019, 1827-1844.
166. D., Leonard-Barton, & I., Deschamps. *Managerial Influence in the Implementation of New Technology*, **Management Science**, 34(10), 2018, 1252-1265.
167. P. J., Hu, P. Y., Chau, O. R., Sheng, & K. Y., Tam. *Examining the Technology Acceptance Model Using Physician Acceptance of Telemedicine Technology*, **Journal of Management Information Systems**, 16(2), 2019, 91-112.
168. Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. *User Acceptance of Computer Technology: A Comparison of Two Theoretical Models*, **Management Science**, 35(8), 2018, 982-1003.
169. S., Taylor, & P.A., Todd. *Understanding Information Technology Usage: A Test of Competing Models*, **Information Systems Research**, 6(2), 2017, 144-176.
170. V., Venkatesh, & F. D., Davis. *A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies*, **Management Science**, 46(2), 2020, 186-204.
171. I., Ajzen. *The Theory of Planned Behaviour: Reactions and Reflections*, **Psychology & Health**, 26(9), 2019, 1113-1127.
172. E., Karahanna, D. W., Straub, & N. L., Chervany. *Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs*, **MIS Quarterly**, 23(2), 2009, 183.

173. J., Zhang, & E., Mao. *Cash, Credit, or Phone? An Empirical Study on the Adoption of Mobile Payments in the United States*, **Psychology & Marketing**, 37(1), 2020, 87-98.
174. A., Bandura. *Social Cognitive Theory: An Agentic Perspective*, **Annual Review of Psychology**, 52(1), 2018, 1-26.
175. D., Compeau, C.A., Higgins, & S., Huff. *Social Cognitive Theory and Individual Reactions to Computing Technology: A Longitudinal Study*, **MIS Quarterly**, 23(2), 2018, 145.
176. G. C., Moore, & I., Benbasat. *Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation*, **Information Systems Research**, 2(3), 2018, 192-222.
177. R. L., Thompson, C. A., Higgins, & J. M., Howell. *Personal Computing: Toward a Conceptual Model of Utilization*, **MIS Quarterly**, 15(1), 2019, 125.
178. V., Venkatesh, & C., Speier. *Computer Technology Training in the Workplace: A Longitudinal Investigation of the Effect of Mood*, **Organizational Behavior and Human Decision Processes**, 79(1), 2019, 1-28.
179. F. D., Davis, R. P., Bagozzi, & P. R., Warshaw. *Extrinsic and Intrinsic Motivation to Use Computers in the Workplace*, **Journal of Applied Social Psychology**, 22(14), 2012, 1111-1132.
180. M., Blut, A. Y. L., Chong, Z., Tsiga, & V. Venkatesh, *Meta-analysis of the unified Theory of Acceptance and Use of Technology (UTAUT): Challenging its Validity and Charting a Research Agenda in the Red Ocean*. **Association for Information Systems**. 2022
181. K., Tamilmani, N. P., Rana, S. F., Wamba, & R. Dwivedi, *The Extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature Review and Theory Evaluation*. **International Journal of Information Management**, 57, 2021, 102269.
182. B., Gupta, S., Dasgupta, & A., Gupta. *Adoption of ICT in a Government Organization in a Developing Country: An Empirical Study*, **The Journal of Strategic Information Systems**, 17(2), 2018, 140-154.
183. S., Chauhan, & M., Jaiswal. *Determinants of Acceptance of ERP Software training in Business Schools: Empirical Investigation using UTAUT Model*, **The International Journal of Management Education**, 14(3), 2016, 248-262.

184. F. D., Davis. *User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts*, **International Journal of Man-Machine Studies**, 38(3), 2018, 475-487.
185. B. H., Sheppard, J., Hartwick, & P. R., Warshaw. *The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research*, **Journal of Consumer Research**, 15(3), 2018, 325.
186. F., Kerstin. *Knowledge Potential Measurement and Uncertainty*, Deutscher Universitätsverlag, 2014. ISBN 978-3-322-81240-7. OCLC 851734708.
187. D. O. Bakare. *The Use of Social Media technologies (SMT) among Academic Librarians in South-West, Nigeria*. Department Of Information Studies, College of Humanities, School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa. 2018.
188. R. S., Sandhu. *Role Hierarchies and Constraints for Lattice-based Access Control*, in Proceedings of the 4th European Symposium of Research in Computer Security, Italy, 2009.
189. Y., Cherdantseva, & J., Hilton. *The Survey of Information Security and Information Assurance Professionals*, In: Organizational, Legal, and Technological Dimensions of Information System Administrator. Almeida F., Portela, I. (eds.). IGI Global Publishing, 2013.
190. M., Endsley. *Direct Measurement of Situation Awareness: Validity and Use of SAGAT*, In *Situational Awareness*, Routledge, 2017, 129-156.
191. M. R., Endsley, & E. S., Connors. *Situation awareness: State of the art*. *IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, 2008, 1-4.
192. D. F., Malanga, & B. C. G., Kamanga. *E-records Readiness at Karonga District Council in Malawi: Applying IRMT E-Records Readiness Assessment Framework*, **Information Development**, 2018, 1-10. DOI: 10.1177/0266666918766971
193. K. K., Adu, & P., Ngulube. *Key Threats and Challenges to the Preservation of Digital Records of Public Institutions in Ghana*, **Information, Communication & Society**, 20(8), 2017, 1127- 1145.
194. B. O., Odhiambo. *Institutional Readiness for Digital Archives Management at United States International University-Africa*, **Archives and Manuscripts**, 46(3), 2019, 1-24. DOI:10.1080/01576895.2018.1558407

195. M. J., Phiri, & A. G., Tough. *Managing University Records in the World of Governance*, **Records Management Journal**, 28(1), 2018, 47-61. doi:10.1108/RMJ-11-2016-0042
196. S., Bigirimana, N., Jagero, & P., Chizema. *An Assessment of the Effectiveness of Electronic Records Management at Africa University, Mutare, Zimbabwe*, **British Journal of Economics, Management & Trade**, 10(1), 2015, 1-10.
197. M., Mukred, Z. M., Yusof, U. A., Mokhtar, & F., Fauzi. *Taxonomic Framework for Factors Influencing ERMS Adoption in Organizations of Higher Professional Education*, **J. Inf. Sci.**, 45(2), 2019, 139–155.
198. R. K., Haraldsdottir, & J., Gunnlaugsdottir. *The Missing link in Information and Records Management: Personal Knowledge Registration*, **Records Management Journal**, 2(1), 2018, 46-58.
199. C. J., Mutimba. *Implementation of Electronic Document and Records Management System in the Public Sector: A Case Study of the Ministry of Higher Education Science and Technology*, Naironi: University of Nairobi, 2014.
200. A., Malekani, & A. B., Alphonse. *Assessing the Efficacy of Electronic Document Management System in Records Management at Sokoine University of Agriculture*, **Library Philosophy and Practice (e-journal)**, 2022, 7417. <https://digitalcommons.unl.edu/libphilprac/7417>
201. M., Issa, & J., Wamukoya. *The Role of Electronic Records Management in Promoting the Delivery of Justice in Tanzania: Perspectives from Dar es Salaam*, **Information and Knowledge Management**, 8(2), 2018, 30–35.
202. X. C., Chen, Z., Zhao, & Y., Liao. *The Antecedents of Information System Success: From an Innovation Implementation Perspective*, Proceedings of 20th International Conference on Industrial Engineering and Engineering Management, Springer, 2013, 905–914.
203. M., Makhura. *The Role of Electronic Records Management in a Service Organization*, MIS Thesis, Johannesburg: Rand Afrikaans University, <http://0etd.uj.ac.za.raulib.rau.ac.za/theses/available/etd-05112005-120710/restricted/Research.pdf>
204. P., Ngulube. *Research procedure used by Master of Information Studies students at the University of Natal in the Period 1982-2002 with Special Reference to their Sampling Techniques and Survey Response Rate: A Methodological Discourse*, **The International Information and Library Review**, 37, 2015a, 127-143.
205. N., Munetsi. *Investigation into the State of Digital Records Management in the provincial Government of Eastern Cape: A Case Study of the Office of the Premier*,

Masters in Library and Information Science (MLIS) thesis, University of Fort Hare, 2011. Available at: <http://ufh.netd.ac.za/bitstream/10353/496/1/Munetsithesis.pdf>

206. Hawash, B., Mukred, M., Mokhtar, U. A., & Nofal, M. I. *The Influence of Big Data Management on Organizational Performance in Organizations: The Role of Electronic Records Management System Potentiality*, **Interdisciplinary Journal of Information, Knowledge, and Management**, 18, 2023, 59-86. <https://doi.org/10.28945/5072>

Chapter Three

Methodology

This chapter presented the methodology used in this study. It includes the research design strategies employed, population, sample, data collection and operation of variables.

3.1 Research Design

This study adopted the survey research design. A descriptive survey design describes a condition or phenomenon as it exists naturally without manipulations. For the purpose

of this study, cross-sectional research enables the researcher to examine the measures of awareness, use and security of Electronic Records Management Systems among Administrative Staff in Public Polytechnics, Edo State, Nigeria. This method is appropriated because it is found useful in the collection of data on phenomena as employed by earlier scholars that share similar context with this study¹. The method enables the researcher to collect data from a sample population that is representative of the total population.

3.2 Population of the Study

The population of this study comprised of Two Hundred and Forty-five administrative staff in Public Polytechnics, Edo State, Nigeria. The two (2) Public Polytechnics in Edo State are Auchi Polytechnic, Auchi and Edo State Polytechnic, Usen.

Table 3.1: Population of the Study

S/N	Public Polytechnics	Study Population
1.	Auchi Polytechnic, Auchi	190
2.	Edo State Polytechnic, Usen	55
	Total	245

Source^{2,3}

3.3 Sample and Sampling Techniques

This study has a total of 245 respondents which is made up of administrative staff in Auchi Polytechnic, Auchi and Edo State Polytechnic, Usen, Edo State, Nigeria, which represent the total population. Census sampling was used in choosing the respondents who are administrative staff given their small number in the institution.

3.4 Description of Research Instrument

The instrument for data collection was the structured questionnaire titled: Awareness, Use and Security of Electronic Records Management System Scale (AUSERMS Scale). The instrument was a structured questionnaire adapted from previous empirical studies and the theories that underpinned the study. This study adopted the Likert scale design which allows the respondents to provide their opinion about the issue under study. The instrument is made up of four sections, which are as follows:

Section A: This contains the demographic information of respondents which is self-developed. The Bio-data of respondents was measured through five (5) factors, namely gender, age, marital status, educational qualification, and years of experience.

Section B: This section is designed to collect data on Use of Electronic Records Management System by administrative staff. The 15-items were adapted from existing literature⁴. The scale used a 4-point response format of 4 = Very High Extent (VHE), 3 = High Extent (HE), 2 = Low Extent (LE), 1 = Very Low Extent (VLE). Example of statement include: ERMS enhances my work effectiveness, my interaction with the ERMS is clear and understandable; ERMS has availability of technical assistance that is, a specific person (or group) is available for assistance with ERMS difficulties amongst others.

Section C: This is Security of ERMS scale with 15-items. The items were adapted from existing literature on Security of ERMS⁴. The response options provided in this questionnaire followed the 4-point response format of 4 = Very High Extent (VHE), 3 = High Extent (HE), 2 = Low Extent (LE), 1 = Very Low Extent (VLE). Examples of statement include: Data integrity in the ERMS system affects the efficiency of our operations and the quality of our decisions; the system is very compatible with the organizational culture and support; the words and phrases in contents provided by ERMS are consistent etc.

Section D: This is Awareness of ERMS Scale with 14-items. The items were adapted from existing literature⁶. The response options provided in this questionnaire followed the 4-point response format of 4 = Strongly Agree (SA), 3 = Agree (A), 2 = Disagree (D), 1 = Strongly Disagree (SD). Examples of statement include: The information I need to assess safety is easily available; I plan ahead in order to handle various adverse incident that may arise; I know how to act to maintain safety, amongst others.

3.5 Validity of Research Instrument

The items for the instrument were gathered through related literature review and theoretical adaptation from questionnaires that have been used by other researchers. Both face and content validity were done with the input of the supervisor and other experts in the field of information management. Corrections made were incorporated in constructing the final questionnaire and were given out to the respondents of the study.

3.6 Reliability of the Instrument

The researcher subjected the questionnaire to a reliability test to check internal consistency of all items measuring each variable in the study. The reliability of the instrument was done through a pilot study using 30 copies of the questionnaire which were administered to office managers in Kogi State Polytechnic, Lokoja. Kogi State Polytechnic, Lokoja was used as it has the same characteristics with the two polytechnics under study. Data obtained were subjected to Cronbach's alpha reliability test to establish internal consistency of the items.

Table 3.2 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	No. of Items

.916	.913	44
------	------	----

The table shows the reliability test of the questionnaire. Adequate interval consistency reliability (Cronbach's alpha) must be greater than 0.70. The result of the reliability test is 0.916 which shows that each item appears to be good; all the items should be kept.

3.7 Method of Data Collection

Data were collected to address the objectives of the study through a structured questionnaire in line with existing literature. The instrument worked well with a descriptive survey research because it supports the collection of data regarding opinion and perception of respondents at a point in time on issues raised. A letter of introduction and project attestation form was obtained from the Department of Information Management, Lead City University which was used to gain permission to conduct the survey among administrative staff in Public Polytechnics, Edo State.

A two (2) day training was conducted for two (2) research assistants to ease the administration, retrieval and initial sorting of copies of the questionnaires. The researcher and research assistants worked with the Registrar (Personnel) of the institutions to ensure confidentiality of their responses while briefing them on the need for adequacy of responses and advantages embedded in the findings of the study.

3.8 Methods of Data Analysis

The data were analyzed using the descriptive and inferential statistics. Descriptive statistics (frequency distribution, simple percentage and mean) was used to analyze

research question one to three. Inferential statistics was used to analyze null hypotheses one and two using linear regression analysis. All hypotheses in the study were tested at 0.05 level of significance. The data collected for the study were analyzed using Statistical Package for Social Sciences (SPSS), Version 24.

Lead City University Ibadan DO NOT COPY

Endnotes

1. K., Chaokromthong, & N., Sintao. *Sample Size Estimation using Yamane and Cochran and Krejcie and Morgan and Green Formulas and Cohen Statistical Power Analysis by G Power and Comparisons*, **APHEIT International Journal**, 10(2), 2021, 76-86.
2. Numbers of Administrative Staff, Human Resources Department, Auchu Polytechnic, 2023
3. Numbers of Administrative Staff, Human Resources Department Edo State Polytechnic, 2023,
4. M., Mukred, Zawiyah M. Yusof & Fahad M. Alotaibi. *Guaranteeing the Productivity of Higher Learning Institutions through Electronic Records Management System (ERMS)*, **IEEE Access**, 20, 2019, 1-23. DOI 10.1109/ACCESS.2019.2927614
5. M., Mukred, Z. M., Yusof, W. A., Al-Moallemi, U. A., Mokhtar, & B., Hawash. *Electronic Records Management Systems and the Competency of Educational Institutions: Evidence from Yemen*, **Information Development**, 026666692098082. doi:10.1177/0266666920980829
6. B., Sætrevik. *Developing a Context-general Self-report Approach to Measure Three-level Situation Awareness*, **International Maritime Health**, 64(2), 2018, 66-71.

Chapter Four

Results and Discussion of Findings

This chapter presents the analysis of the data collected to answer the research questions and test the hypotheses. The analysis also includes the demographic distribution of the respondents as well as the questionnaire return rate. Descriptive statistics is used to analyze the research questions and the decision rule is that all items with mean score equal to or greater than 2.5 is accepted as significant while hypotheses are tested at 0.05 level of significance.

4.1 Demographic Data of Respondents

A total of two hundred and forty-five (245) copies of questionnaire were administered and two hundred and twenty-three (223) copies were returned. After sorting the questionnaires, two hundred and twenty three (223) copies were certified as duly filled and considered usable. The useable questionnaire represented 91.02% response rate. The high response rate was recorded as the researcher administered the instruments with the help of research assistants who put concerted efforts in reaching out to the staff to request them to participate in the study.

Table 4.1 Demographic Characteristics of Respondents

	Category	frequency	percentage (%)
Sex	Male	85	38.1
	Female	138	61.9
Age	21 – 30 years	56	25.1
	31 – 40 years	116	52.0
	41 – 50 years	34	15.2
	51 years and above	17	7.6
Marital Status	Single	65	29.1
	Married	136	61.0
	Divorced	14	6.3
	Widower	3	1.3
	Widow	5	2.2
Educational Qualification	NCE	12	5.4
	ND	42	18.8
	HND	91	40.8
	B.Sc.	29	13.0
	M.Sc.	24	10.8
	MBA	25	11.2
Years of Work Experience	1 – 10 years	95	42.6
	11 – 20 years	87	39.0
	21 – 30 years	23	10.3
	31 years and above	18	8.1

Source: Field Work, (2024)

Table 4.1 presents the demographic characteristics of respondents used for this study. 85 respondents representing 38.1% were male while 138 respondents representing 61.9% were female, indicating that most of the respondents were female. 56 respondents representing 25.1% were between the ages of 21 - 30 years, 116 respondents representing 52.0% were between 31 - 40 years, 34 respondents representing 15.2% were between 41 - 50 years while the remaining 17 respondents representing 7.6 % were between 51 years and above. This indicated that majority of the respondents were between the age range of 31 - 40 years. 65 respondents representing 29.1% were single, 136 respondents representing 61.0% were married, 14 respondents representing 6.3% were divorced, 3 respondents representing 1.4 % were widower and 5 respondents representing 2.2 % were widow. This showed that majority of the respondents are married. Also, 12 respondents representing 5.4% had NCE for their education level, 42 respondents representing 18.8% had ND, 91 respondents representing 40.8% had HND, 29 respondents representing 13.0% had Bachelor's degree, and 24 respondents representing 10.8% had M.Sc., while 25 respondents representing 11.2% had Master of Business Administration. This indicated that majority of the respondents are HND holders. Furthermore, 95 respondents representing 42.6% had 1 - 10 years of work experience, 87 respondents representing 39.0% had 11 - 20 years of work experience, 23 respondents representing 10.3% had 21 - 30 years of work experience, while 18 respondents representing 8.1% had 31 years and above of work experience. This showed that majority of the respondents have work experience of 1 - 10 years.

4.2 Analysis of Research Questions

Research Question One: What is the level of use (Frequency of use of ERMS, Purpose of use of ERMS, Specific time spent on each use of ERMS) of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State?

Table 4.2 Level of Use of ERMS by Administrative Staff

	VHE		HE		LE		VLE		Mean	SD
	N	%	N	%	N	%	N	%		
Frequency of Use of ERMS										
ERMS enables me to accomplish task quickly.	138	61.9	69	30.9	12	5.4	4	1.8	3.53	0.68
ERMS increases efficiency in my work.	64	28.7	133	59.6	25	11.2	1	0.4	3.17	0.63
ERMS enhances my work effectiveness.	117	52.5	72	32.3	30	13.5	4	1.8	3.35	0.78
ERMS makes my work easier.	69	30.9	107	48.0	41	18.4	6	2.7	3.07	0.77
ERMS gives me greater control over my work.	123	55.2	58	26.0	32	14.3	10	4.5	3.32	0.88
Average Mean									3.29	
Purpose of Use of ERMS										
It is easy to get information using ERMS to do my work.	129	57.8	68	30.5	25	11.2	1	0.4	3.46	0.71
My interaction with ERMS is clear and understandable.	87	39.0	116	52.0	15	6.7	5	2.2	3.28	0.69
ERMS is used for day-to-day operational records keeping.	105	47.1	91	40.8	27	12.1	0	0.0	3.35	0.69
It is easy to detect and correct errors using ERMS.	98	43.9	97	43.5	21	9.4	7	3.1	3.28	0.76
ERMS has availability of technical assistance.	164	73.5	56	25.1	3	1.3	0	0.0	3.72	0.48
Average Mean									3.42	
Specific Time Spent on Each Use										
I have the time necessary to use ERMS.	84	37.7	127	57.0	11	4.9	1	0.4	3.32	0.59
I spend 1 hour per day in using ERMS.	103	46.2	111	49.8	6	2.7	3	1.3	3.41	0.61
ERMS is compatible with other systems I use hence, I do not waste too much time.	115	51.6	90	40.4	18	8.1	0	0.0	3.44	0.64
I spend less time on ERM due to my other demanding task.	135	60.5	70	31.4	16	7.2	2	0.9	3.52	0.67
I have access to a computer										

anytime I need to use it.	110	49.3	90	40.4	20	9.0	3	1.3	3.38	0.70
Average Mean									3.41	
Grand Average Mean									3.37	

Source: Field work, (2024)

Decision Rule: 1.00 – 1.49 (Very Low), 1.50 – 2.49 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)

Key: Very High Extent (VHE) = 4, High Extent (HE) = 3, Low Extent (LE) = 2, Very Low Extent (VLE) = 1.

Table 4.2 shows the response of the respondents on the level of use of electronic records management system ranging from frequency of use, purpose of use and specific time spent on each use. For frequency of use, it can be seen that ERMS enables respondents to accomplish task quickly with a mean score of 3.53, increase efficiency of work with mean of 3.17, enhance work effectiveness with mean of 3.35, makes work easier with mean of 3.07, and gives greater control over work with mean of 3.32. The average mean score of 3.29 indicated that there is a high rate of use of ERMS by the respondents.

As for the purpose of use of ERMS, the respondents get information easily with mean of 3.46, their interaction is clear and understandable with mean of 3.28, used for day-to-day operational records keeping with mean of 3.35, easily detects and corrects errors in students' results with mean of 3.28, and the availability of technical assistants with ERMS difficulties with mean of 3.72. The average mean score of 3.42 showed that the purpose of using ERMS is mainly for efficiency and easy retrieval of information.

On the specific time spent on each use of ERMS, the respondents have the time to use it with a mean score of 3.32, spent one hour per day with mean of 3.41, do not waste

too much time with mean of 3.44, spent less time due to other demanding tasks with mean of 3.52, and have access to a computer/internet anytime the need arises with a mean of 3.38. The average mean score of 3.41 showed that there is a moderate rate of time spent on each use. The grand average mean score of level of use of ERMS among the respondents as indicated in Table 4.2, is 3.37. This means that there is a high level of use of ERMS among the respondents.

Research Question Two: What is the level of security (confidentiality, integrity and availability) of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State?

Table 4.3 Level of Security of ERMS by Administrative Staff

	VHE		HE		LE		VLE		Mean	SD
	N	%	N	%	N	%	N	% μ		
Confidentiality of ERMS										
Promotes best practices of managing records.	120	53.8	95	42.6	7	3.1	1	0.4	3.50	0.58
Ensures security of the database management.	67	30.0	137	69.1	17	7.6	2	0.9	3.21	0.61
The system is compatible with organizational culture and support.	132	59.2	69	30.9	219.4	10.4			3.49	0.68
Ensures rights and privileges in access to specific data.	110	49.3	95	42.6	18	8.1	6	2.7	3.41	0.64
Promotes authenticity and integrity of the system.	120	53.8	84	37.7	18	8.1	1	0.4	3.45	0.66
									3.49	
Integrity of ERMS										
Data integrity in ERMS improves efficiency of our operations and the quality of our decisions.	132	59.2	74	33.2	14	6.3	3	1.3	3.50	0.68
Integrity requires awareness of unclean data from the pre-stage of the ERMS.	81	36.3	126	56.5	135.8	3	1.3		3.28	0.63
I understand the concept and value of integrated data available from the ERMS.	132	59.2	60	26.9	26	11.7	52.2		3.43	0.78
Integrity requires control of										

unclean data from the pre-stage of the ERMS.	149	66.8	64	28.7	8	3.6	2	0.9	3.25	0.60
The words and phrases provided by ERMS are consistent.	73	32.7	135	60.5	13	5.8	2	0.9	3.25	0.60
Average Mean									3.29	

Availability of ERMS

ERMS has eased the management and retrieval of information.	101	45.3	100	44.8	17	7.6	5	2.2	3.50	0.71
ERMS brings efficiency through time management.	76	34.1	125	56.1	188.1	4	1.8	3.28	0.67	
The information I need to access is easily available.	111	49.8	93	41.7	15	6.7	4	1.8	3.43	0.70
ERMS grants access to data only to the desired users.	85	38.1	110	49.3	26	11.7	2	0.9	3.25	0.69
ERMS ensures the safety of stored records.	93	41.7	98	43.9	26	11.7	6	2.7	3.38	0.76
Average Mean									3.36	
Grand Average Mean									3.38	

Source: Field work, (2024)

Decision Rule: 1.00 – 1.49 (Very Low), 1.50 – 2.49 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)

Key: Very High Extent (VHE) = 4, High Extent (HE) = 3, Low Extent (LE) = 2, Very Low Extent (VLE) = 1.

Table 4.3 shows the response of the respondents on the level of security of electronic records management system ranging from confidentiality, integrity and availability. For confidentiality, it can be seen that ERMS promotes best practices of managing records with a mean score of 3.50, ensures security of database management with a mean of 3.21, system very compatible with the organizational culture and support with a mean of 3.49, ensures rights and privileges in access to specific database with a mean of 3.41, and promotes authenticity and integrity of the system with mean of 3.45. The average mean score of 3.49 indicated that there is a high level of confidentiality of records with the use of ERMS by the respondents.

For the integrity of ERMS, the respondents believed that data integrity improves efficiency and quality of decisions with mean of 3.50, integrity requires awareness of

unclean data from the pre-implementation stage with mean of 3.28, understand the concept and value of integrated data available with mean of 3.43, integrity requires control of unclean data from the pre-implementation stage with mean of 3.25, and the words and phrases in contents provided are consistent with mean of 3.25. The average mean score of 3.29 showed that there is a high rate of the fact that the records stored with ERMS are not tampered with or degraded.

On the availability of ERMS, the respondents believed that ERMS has eased the management and retrieval of information with a mean score of 3.50, brings efficiency through time management with mean of 3.28, information needed to assess is easily available with mean of 3.43, grants access to data only to the desired users with mean of 3.25, and ensures the safety of stored records with a mean of 3.38. The average mean score of 3.36 showed that there is a high level of availability of records with the use of ERMS. The grand average mean score of level of security of ERMS among the respondents as indicated in Table 4.3, is 3.38. This means that there is a high level of security of ERMS among the respondents.

Research Question Three: What is the level of Electronic Records Management System (ERMS) awareness among administrative staff of Public Polytechnics in Edo State?

Table 4.4 Level of Awareness of ERMS by Administrative Staff

	SA		A		D		SD		Mean	SD
	N	%	N	%	N	%	N	% μ	$\sigma=\sqrt{x}$	
Perception of ERMS										
I sometimes find it difficult getting enough space for myrecords storage.	59	26.51	51	67.7	1	125.4	1	0.4	3.46	0.54

Some of the records I need to work with are sometimes very difficult to locate.	143	64.1	69	30.9	10	4.5	1	0.4	3.20	0.60
I sometimes lose track of information relevant for main-training safety in my work.	118	52.9	77	34.5	25	11.2	3	1.3	3.59	0.74
I sometimes lose track of my safety due to receiving too much information at the same time.	123	55.2	81	36.3	18	8.1	1	0.4	3.28	0.66
Safety is presented in such a way that makes it difficult to understand.	86	38.6	114	51.1	23	10.3	0	0.0	3.39	0.64

Average Mean 3.38

Comprehension of ERMS

I know how to act to maintain safety.	123	55.2	84	37.7	16	7.2	0	0.0	3.48	0.63
It is hard to know which consequences my actions have for safety.	55	24.7	135	60.5	31	13.9	2	0.9	3.09	0.64
I know which information is relevant for safety and which information is not relevant.	154	69.1	59	26.5	8	3.6	2	0.9	3.64	0.60
I feel confident that I know how to deal with various adverse incidents that may arise.	57	25.5	150	67.3	16	7.2	0	0.0	3.18	0.54
I know which situations in my work involve higher risks.	122	54.7	76	34.1	18	8.1	7	3.1	3.40	0.77

Average Mean 3.36

Projection of ERMS

I plan ahead in order to handle various adverse incident that may arise.	98	43.9	109	48.9	13	5.8	3	1.3	3.35	0.65
I notice when an unsafe situation is about to arise in my work.	97	43.5	103	46.2	18	8.1	5	2.2	3.31	0.72
It is impossible to predict what will happen during an incident.	119	53.4	79	35.4	20	9.0	5	2.2	3.40	0.75
I usually know what is going to happen next with regards to safety.	114	51.1	75	33.6	25	11.2	94	0.3	3.32	0.83

Average Mean 3.35

Grand Average Mean 3.36

Source: Field work, (2024)

Decision Rule: 1.00 – 1.49 (Very Low), 1.50 – 2.49 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)

Key: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1.

Table 4.4 shows the response of the respondents on the level of awareness of electronic records management system ranging from perception, comprehension and projection. For perception of ERMS, the respondents agree that they sometimes find it difficult getting enough space for records storage with a mean score of 3.46, sometimes find it difficult to locate some of the records with a mean of 3.20, sometimes lose track of information relevant for maintaining safety with a mean of 3.59, sometimes lose track of safety due to receiving too much information at the same time with a mean of 3.28, and some of the information needed to access safety is presented in a way that makes it difficult to understand with mean of 3.39. The average mean score of 3.38 indicated that the respondents' perception of ERMS is high as can be seen in the prevailing circumstances leading to need of ERMS by the respondents.

For the comprehension of ERMS, the respondents agree that they know how to act to maintain safety with a mean of 3.48, hard to know which consequences their actions have for safety with mean of 3.09, know which information is relevant for safety and which is not with a mean of 3.64, feel confident that they know how to deal with the various adverse incidents that may arise with a mean of 3.18, and know which situations in work involve higher risks than others with a mean of 3.40. The average mean score of 3.36 showed that there is a high level of understanding of the prevailing circumstances as to the use of ERMS by the respondents.

On the projection of ERMS, the respondents agree that they plan ahead in order to handle various adverse incidents that may arise with a mean score of 3.35, notice when an unsafe situation is about to arise at the workplace with a mean of 3.31,

impossible to predict what will happen during an adverse incident with a mean of 3.40, and usually know what is going to happen next with regards to safety with a mean of 3.32. The average mean score of 3.35 showed that there is a high attempt to predict the current situation into the future as to the use of ERMS. The grand average mean score of level of awareness of ERMS among the respondents as indicated in Table 4.4, is 3.36. This means that there is a high level of awareness of ERMS among the respondents.

4.3 Presentation of Test of Hypotheses

The null hypothesis one (H_01) which states that there will be no significant influence of awareness on use of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State was tested using regression analysis. The null hypothesis two (H_02) which states that There will be no significant influence of awareness on security of ERMS among administrative staff of Public Polytechnics in Edo State was also tested using regression analysis. The data for Awareness (independent variable) was generated by summing responses of all variable items respectively while level of use of ERMS and Security level (dependent variables) were generated by adding responses of all items used to measure the variables.

H_01 : There will be no significant influence of awareness on the use of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria.

Table 4.5 Regression Analysis Result of Influence of Awareness on the Use of Electronic Records Management System among administrative staff.

Model R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	0.621 ^a	0.385	0.382	0.30156

a. Predictors: (Constant), Awareness

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	12.469	1	12.469	137.114	.000 ^b
Residual	19.915	219	.091		
Total	32.384	220			

a. Dependent Variable: ERMS

b. Predictors: (Constant), Awareness

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.059	.199		5.327	.000
Awareness	.692	.059	.621	11.710	.000

a. Dependent Variable: ERMS

Source: Field work, (2024)

$$ERMS = 1.059 + 0.692 \text{ Awareness}$$

$$ERMS = \beta_0 + \beta_1 \text{ Awareness} + \text{error term}$$

From the analysis in Table 4.5 above, there is the R which is the correlation coefficient and is 0.621. This means there is a positive correlation between the ERMS and Awareness. The R Square is the coefficient of determination which is 0.385. This can be interpreted as the proportion of the total variability in the response variable (use of ERMS) that is accounted for by the predictor variable (Awareness). Therefore, it is seen that about 38.5% of the total variation in the use of ERMS is been accounted for by the Awareness. The adjusted R-square indicates a better fit of

the regression model to the data. The higher the adjusted R-square the better the data fit the model.

From the regression model (equation) obtained above, a positive relationship between the two variables was observed, that is the use of ERMS and Awareness have a positive impact. It can be seen that the regression model obtained indeed fitted the relationship quite well enough. However, from the ANOVA table and F-statistic = 137.114 on 1 df, with p-value = 0.000, it can be interpreted as follows: since the p-value $0.000 < 0.05$ level of significance, it means that the model as a whole is significant. It is to be noted that the F-statistic yielding a significant result means that the model fit the data well and the β is non-zero. This leads to the rejection of the null hypothesis of the coefficient equal zero and the acceptance of the alternative hypothesis.

From the Regression analysis result, it was found that the independent variable (Awareness) has a positive influence on the response variable (use of ERMS), which implies that, a unit increment in the Awareness will result to 69.2% increment in the use of ERMS. The P-value is 0.000 which is less than 0.05 level of significance. It can therefore be conclude that there is a significant influence of awareness on the use of ERMS among administrative staff of Public Polytechnics in Edo State.

H₀2: There will be no significant influence of awareness on the security of Electronic Records Management System (ERMS) among administrative staff of Public Polytechnics in Edo State, Nigeria.

Table 4.6 Regression Analysis Result of Influence of Awareness on the Security of Electronic Records Management System among administrative staff.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.684 ^a	0.468	0.466	.25783

a. Predictors: (Constant), Awareness

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	12.819	1	12.819	192.836	.000 ^b
Residual	14.558	219	.066		
Total	27.377	220			

a. Dependent Variable: Security

b. Predictors: (Constant), Awareness

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.024	.170		6.024	.000
Awareness	.701	.050	.684	13.887	.000

a. Dependent Variable: ERMS

b. Predictors: (Constant), Awareness

Source: Field work, (2024)

$$\text{Security} = \beta_0 + \beta_1 \text{Awareness} + \text{error term}$$

$$\text{Security} = 1.024 + 0.701 \text{ Awareness}$$

From the analysis in Table 4.6 above, the R which is the coefficient of the correlation is 0.684. This means that there is a positive correlation between the Security and

Awareness. R Square is the coefficient of determination which is 0.468. This can be interpreted as the proportion of the total variability in the response variable (Security of ERMS) that is accounted for by the predictor variable (Awareness). Therefore, it can be said that about 46.8% of the total variation in the use of Security is been accounted for by the Awareness.

From the regression model (equation) obtained above, a positive relationship between the two (2) variables was observed. The F-statistic = 192.836 on 1 df, p-value = 0.000. Since the p-value < 0.05, it means that the model as a whole is significant. It is to be noticed that the F-statistic yielding a significant result means that the model fit the data well and the β is non-zero. This leads to the rejection of the null hypothesis of the coefficient equal zero and the acceptance of the alternative hypothesis.

From the Regression analysis result, it was found that the independent variable (Awareness) has a positive influence on the response variable (Security of ERMS), which implies that, a unit increment in the Awareness will result to 70.1% increment in the level of Security of ERMS. The t-statistic test also found out that there is significant influence of awareness on the security of ERMS. It can therefore be concluded that there is a significant influence of awareness on the security of ERMS among administrative staff of Public Polytechnics in Edo State.

Summary of Findings

The study examined the influence of awareness on the use and security of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State using Regression analysis. From the Regression result, it was found that the

responses (Use of ERMS and Security) have a significant relationship with the awareness, since the p-value ($0.000s < 0.05$ ($\alpha =$ level of significance) and a positive relationship as it is a positive slope/coefficient of the dependent variable (use of ERMS and Security of ERMS). The positive relationship implies that a unit increase in Awareness output will result to an increment in the ERMS and Security.

The F-statistic result (137.114 and 192.836) with p-value ($0.000 < 0.05$) shows that the model fits the data better, meaning the data provide sufficient evidence to conclude that the regression model fits the data better. This is good news because it generally means that the independent variable (Awareness) in the model improves the fit. The coefficient of determination R-squared or (R^2) of 0.385 and 0.468 implies that the independent variable explained approximately 38.5% and 46.8% information about the dependent variables.

Conclusively, it can be seen that the two dependent variables (use of ERMS and Security of ERMS) are significant with the dependent variable. Therefore, the two null hypotheses (H_0) will be rejected and the two alternative hypothesis that says: there is significant influence of awareness on the use of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State; and there is significant influence of awareness on the security of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State will be accepted.

4.4 Discussion of Findings

The result of Research Question One shows that the grand average mean is above 3.0 which shows that there is a high level of use of electronic records management system among administrative staff of Public Polytechnics in Edo State. The adoption of ERMS was prevalent among the surveyed institutions, indicating a positive trend toward digitizing record-keeping processes. However, challenges were identified, such as resistance to change and insufficient training programmes for staff, impacting the optimal utilization of ERMS. More effort is required by the management of public polytechnics in Edo State to ensure that the level of use of electronic records management system has to be continuous and consistent. This would require consistent training on facilities that would positively enhance the managerial goal like presenting the workers with an enabling environment for the staff to allow them to learn how to use electronic records management system. This should improve the job performance in public Polytechnics in Edo State. A research regarding measurable benefits of using ERMS in the public institutions in Turkey was conducted. The finding showed the positive attitude toward the adoption of ERMS. According to findings, the use of ERMS is easy and sufficiently flexible as well as resulting in increased productivity¹. Another study carried out in Yemen on management support on the adoption of ERMS found that Management Support promotes participation and fast adoption. In other words, all the HPE institutions in Yemen have a positive attitude from the top management to support ERMS adoption².

The result of Research Question Two shows that the grand average mean is also above 3.0. This shows that the level of security of electronic records management system (ERMS) among administrative staff of Public Polytechnics in Edo State. Security emerged as a critical issue in the context of ERMS. Though few

instances of unauthorized access, data breaches and inadequate data encryption measures were reported, this still highlights vulnerabilities in the existing systems. The underlining issues discovered suggest that a lot of efforts is needed to ensure that within public polytechnics in Edo State, the security provide an enabling work environment that guarantee the staff work safety. Specifically, management of public polytechnics in Edo State need to address issues of security in ERMS and develop an effective and proper monitoring of the ERMS that will reduce the leakage of information to the least minimum if not curbed completely. This should improve the work environment within the public Polytechnics and consequently positively affect the staff job performance in the institution. A research conducted indicated that public institutions of higher learning in Libya have no policy and guidelines for implementing the ERMS for safety and security of records. This has resulted in difficulties when personnel have to handle and manage sensitive e-records. The policy is the main factor that mediates the relationship between records management (RM) and accountable and efficient governance³. Another study recommended that organizations should adopt and implement a policy for records security for the purpose of creating and managing authentic, reliable, complete and useable records that can support business functions for as long as needed⁴.

✓ The result of Research Question Three posited that the grand average mean is also greater than 3.0 which shows the level of awareness of electronic records management system among administrative staff of Public Polytechnics in Edo State. A significant portion of the surveyed population demonstrated a moderate to high level of awareness regarding electronic records management system. Awareness was found to be positively correlated suggesting that individuals with higher qualifications and

longer work histories tend to be more cognizant of electronic records management practices. This research also shows that more than average of the administrative staff are aware of the electronic records management system. The few underlining issues discovered suggest that effort is needed regarding training experience to ensure an all-round awareness. Aligning with the issues identified, management should ensure all staff go for regular training and provide financial support for the acquisition of skill to enhance electronic system that ensures training opportunities to all. In order to assess the awareness of electronic records management system of the higher education institutions in Nigeria, a study conducted revealed that the majority of higher educational institutions in Nigeria make use of electronic gadgets like computer and cloud in managing their records. This has reduced the rate of loss of the institutions records. Findings also showed that electronic records management system contributed to effective administration at the university, and consequently to the effective and efficient delivery of services to the students, lecturers and the community at large⁵.

Results of hypothesis one shows that there is a significant influence of awareness on the use of electronic records management system among administrative staff of public polytechnics in Edo State. Therefore, the finding of the first hypothesis was supported by previous empirical studies. For example, a related study examined the electronic records management system and its effectiveness at the University of Lagos, Nigeria. A descriptive research design was used for the study and three research questions were answered. The population includes 12 faculties with 1,400 academic staff, 3,288 non-teaching staff in all non-academic departments and 77 deans of the University. A simple random sampling technique was used to select 36 faculty members from two faculties, 330 non-teaching staff from the registration office, and 14 deans from the

faculties of education and science. A total of 380 participants were used using a self-designed tool titled “Electronic management system and learning effectiveness questionnaire” to collect data. Data were analyzed with mean and standard deviation. Research shows that the introduction and use of electronic records management system at the University of Lagos has significantly reduced the processing time of official grades; that the dissemination of information to employees has been positively improved through the use of electronic records management systems; and students' result processing speed also increased. Therefore, among other recommendations, the university management should further enhance staff knowledge on electronic records management and ensure regular power supply to facilitate informed access. Information is not interrupted on the due date^{6, 7, 8, 9}.

Similarly, this article evaluated electronic records management system (ERMS). An institution's ERMS application provides the best value in terms of improving business efficiency rather than monitoring the institution's inbound and outbound traffic. To this end, a preliminary evaluation of the measurable usability of ERM applications was carried out using the example of a public sector organization. To demonstrate the administrative level benefits of the ERMS application used by the Ministry of Development, a survey of senior staff and records management officers using the system was also conducted. Additionally, non-quantifiable benefits were also discussed^{10, 11}. Adoption of electronic records management system is said to be hindered by employee compliance and internet connectivity. This has been documented in comparative studies that highlighted the importance of employee compliance in adopting electronic records management systems. The study also revealed that Internet access poses challenges for implementing electronic recording

management systems. This is observed as a result of epileptic internet connectivity across Nigeria. It is recognized that Internet connection is very important in the operation of electronic records management systems^{12,13}.

The electronic document management system should be able to present information in an integrated way about the content, structure and context of the document. The availability of integrated information will make it easier to find records when needed so they support the principle of high availability, meaning records are always available and ready to be used to support operations going on in the organization¹⁰. Records management should also have clear policies or regulations on how different types of records are handled. This policy must be communicated to all relevant parties, including the organizations or entities that create the documents. Furthermore, the records management system in place must enable and facilitate the search for historical records. A document must be known to everyone and accessible at all times, so that in the event of damage or loss, it is known who is responsible^{6,14,15}.

A study carried out on Effectiveness of ICT policy implementation on the use of electronic records management system (ERMS) in higher education institutions in Nigeria found that some advantages of electronic document management are quick searches and authorized use of documents without leaving the office; Flexible indexing and easy modification; full-text search; less likely files will be lost; save space; reduces the risk of damage to digitally stored records; facilitate the sharing (sharing) of records; improve security and easy data recovery^{16,17}.

Research shows that the implementation of IT policies has a significant influence on ERMS usage. This is attributed to the existence of a policy document that ensures compliance with the application of specific electronic document management processes such as assessment, accession, description, retention, preservation, access and use. Furthermore, the research shows that in terms of the legal obligations that universities face, the Data Protection Act requires universities to provide accurate and reliable information when requested. Therefore, preserving electronic records using ERMS can help ensure that electronic records maintained by the College are traceable, accurate and reliable. Therefore, if users realize that there is a well-documented ERMS policy guiding its use, they will be motivated to use the electronic system^{18,19}.

The impact of information systems on user performance, the study found that access to information was significant on the level of utilization of the information system by the users, thus increasing their performance. The study further revealed that the provision of access may be regarded as the ultimate objective of recordkeeping, as records are created, kept and preserved to make them available for those who are entitled to access and use them. Therefore, to enable electronic records to be used over time, they must remain readable by computer and intelligible to humans. This however, does not mean that obsolete hardware and software should be preserved along with the records to ensure access to electronic records. Rather, steps have to be taken to ensure that the records themselves are adapted or migrated to new and compatible systems as technological change takes place⁶.

The finding of hypothesis two reveals that there is a significant influence of awareness on the security of ERMS among administrative staff of Public Polytechnics

in Edo State. The literature on electronic records management shows that digital data and records are typically simple to update or modify, as well as easy to erase. The literature also demonstrated how readily records' survival and readability in an electronic environment might be jeopardized. Every record keeper and organization faces the task of designing and constructing systems that guarantee the survival, accessibility, availability, and integrity of digital records^{7,20}. The literature also shows that many nations' electronic records management programmes are hampered by a lack of storage and preservation procedures. Since electronic records are much more vulnerable than paper records, care must be taken to ensure their authenticity and accuracy as evidence of accountability.

A study carried out on impact of security on ERMS in Kenya found that security of records ensures that records are protected from unauthorized activities, including inspection, modification, recording and any disruption or destruction. When records are kept confidential from unauthorized usage, their authenticity is guaranteed. This is because confidentiality of records ensures that records are kept from unauthorized access or disclosure²¹. Another study found that the use of ERMS ensures the security of the records by ensuring that the integrity of records is maintained. Data integrity in the ERMS positively affects the efficiency of operations and the quality of decisions. This is because integrity of records safeguards the authenticity, accuracy, preservation, as well as ensuring the completeness of such records²².

Additionally, when the term "preservation" is used in relation to electronic records, it no longer refers to the preservation of the records' medium but rather to the meaning and reliability of the records themselves⁸. Many hard copy records are being digitized so they may be controlled digitally, since electronic records are gradually taking over

as the main record of transactions at universities and other higher education institutions. The ease with which digital records can be searched, accessed, and edited enables large entities to manage information much more efficiently than in the previous. Additionally, digital records are easier to duplicate, share, and do not require the expensive "real estate" (in terms of space occupied) that hard copy records do²¹. Nevertheless, the capacity to generate electronic records has not kept up with the capacity to retain them. The instruments for managing and organizing hardcopy records are cabinets and file folders. Technological developments have allowed easy access to records. Records managers therefore, must take the necessary measures to maintain the safety¹⁶.

Lead City University Ibadan,

Endnotes

1. H. Demirtel & Ö. G. Bayram. *Efficiency of Electronic Records Management Systems: Turkey and Example of Ministry of Development*, **Procedia-Social and Behavioral Sciences**, vol. 147, 2019, pp. 189-196,
2. M. Mukred, M. Y. Zawiyah, & A. M. Umi. *Electronic Records Management Systems and the Competency of Educational Institutions: Evidence from Yemen*. <https://orcid.org/0000-0001-6826-8458>, Vol. 38,01, 2019, pp 345 -360,
3. K. A. Galala & M. Y. Zawiyah, "Electronic Records Management in Institutions of Higher Learning in Libya: A Case Study," **Journal of Information Knowledge Management**, vol. 12, 2021, pp. 1350001-1 - 1350001-21,
4. A. Dikopoulou & A. Mihiotis, *The Contribution of Records Management to Good Governance*, **The TQM Journal**, vol. 24, 2020, pp. 123-141,
5. J. Udensi & P. U. Akor, *An Assessment of Record Management System in Establishment Division of two Universities in Nigeria*, **International Letters of Social and Humanistic Sciences**, vol. 13, 2018, pp. 97-109,.
6. L. Abugabah, Sanzogni, & A. Poropat. *The Impact of Information Systems on User Performance: A Critical Review and Theoretical Model*. 2017 <https://core.ac.uk/download/pdf/143854356.pdf> .
7. J. O. Adekannbi & F. W. Wahab. *Comparative Analysis of the Preservation and Conservation Techniques of Selected Special and Academic Libraries in Nigeria*. 2015 [https://doi.org/10.1016/S0140-6736\(04\)17482-5](https://doi.org/10.1016/S0140-6736(04)17482-5).
8. G. B. O. Adetunla, & A. A. Osunride. *Security Control and Disaster Preparedness As Panacea for Preservation and Conservation Practices In University Libraries in*

South West, Nigeria. **International Journal of Online and Distance Learning**, 1(1), 2016, 26—35.

9. J. Adeyanju. *Electronic Record Management System and Efficiency in the University of Lagos, Nigeria*. **Sokoto Educational Review**, 19(1), 2020, 1-10. <https://doi.org/10.35386/ser.v19i1.243>.
10. J. M. Coffman, J. Spetz, K. Grumbach, M. Ilić, & A. B. Bindman. *Electronic Health Record Availability among Advanced Practice Registered Nurses and Physicians*. 2018 <https://escholarship.org/uc/item/99d9570m>.
11. A. N. Effiong, A. N. Policy Implementation and its Challenges in Nigeria. **International Journal of Advanced Legal Studies and Governance**, Vol. 4, No. 3. 2013.
12. Hakan & Özlem. *Efficiency of Electronic Records Management Systems: Turkey and Example of Ministry of Development*, **Procedia - Social and Behavioral Sciences** 147:2014, 189-196.
13. L. E. Hansen, & A. Sundqvist. *To Make Archives Available Online: Transcending Boundaries or Building Walls?* **Journal of Archival Organization**, 10(3-4).2019, 207-230.
14. M. Madulu. *Adoption of Electronic Record Keeping for Human Resource Management at the President's Office Regional Administration and Local Government, Tanzania* (Doctoral dissertation, Mzumbe University), 2016.
15. R. M. Olalekan. "What we Learn Today is how we behave Tomorrow": A study on Satisfaction Level and Implementation of Environmental Health Ethics in Nigeria Institutions. **Open Access Journal of Science**, 4(3), 2020, 82-92. DOI: 10.15406/oajs.2020.04.00156.
16. R. M. Olalekan, S. H. Olawale, A. Christian, & A. O. Simeon. *Practitioners Perspective of Ethical Cases and Policy Responses by Professional Regulator: The Case of Environmental Health Officers Registration Council of Nigeria (EHORECON)*. **American Journal of Epidemiology & Public Health**, 4(1), 2020, 016-023. Retrieved from <https://www.scireslit.com/PublicHealth/AJEPH-ID23.pdf>.
17. G. Mampe, & T. Kalusopa. *Records Management and Service Delivery: The Case of Department of Corporate Services in the Ministry of Health in Botswana*. **Journal of the South African Society of Archivists**. 45, 2021, 2-23.
18. C. T. Nengomasha, & A. Chikomba. *Status of ERMS Implementation in the Public Sector in Namibia and Zimbabwe*. **Records Management Journal**, 28(3), 2018, 252-264.

19. C. T. Nengomasha. *Managing Public Sector Records in Namibia: A Proposed Model*. **Information Development**, 25(2), 2019, 112-126.
20. M. J. Phiri. *Managing University Records and Documents in the World of Governance, Audit and Risk: Case Studies from South Africa and Malawi* (Doctoral Dissertation, University of Glasgow) 2016.
21. N. S. Taharudin, & T. A. F. Izhar. *A Study on Record Management Implementation in Private Sector: Analysis on Competency, Storage and Retention*. **International Journal of Academic Research in Business and Social Sciences**, 8(6), 2018, 882-897.
22. C. M. Ambira, H. M. Kemoni and P. Ngulube. *A Framework for Electronic Records Management in Support of E-government in Kenya*. **Records Management Journal**, 29(3), 2019, 305-319.

Lead City University Ibadan DO NOT COPY

Chapter Five

Conclusion

This chapter presents and discusses the summary of findings, conclusions and provides useful recommendations, contributions to knowledge and suggested areas of further studies.

5.1 Summary of Findings

The main objective of this study is to investigate the influence of awareness on the use and security of electronic records management system among administrative staff of Public Polytechnics in Edo State. In order to fulfill its primary goal, the study is divided into five chapters. The study's background was covered in the first chapter, which confirmed the impact of administrative staff of Public Polytechnics in Edo State's awareness of the use and security of electronic records management systems. Numerous researches on the workplace, job performance and training experiences have been conducted. Additionally, an empirical submission about the security, utilization and awareness of electronic records management system has been submitted.

In order to determine the statistical significance of the impact of awareness on the use and security of electronic records management systems among administrative staff of Public Polytechnics in Edo State, Nigeria, the generated data were sorted, coded and analyzed. Finally, the hypotheses were accepted. The primary empirical findings of this study can be summed up as follows based on the interpretation of data analysis and study findings:

1. There is high level of use (frequency of use, purpose of use and specific time spent on each use) of electronic records management system among administrative staff of Public Polytechnics in Edo State.
2. Administrative staff of Public polytechnics in Edo State have a high level of security for their electronic records management systems.
3. The level of awareness regarding electronic records management system among administrative staff of Public Polytechnics in Edo State is equally high.
4. There is significant influence of awareness on the use of electronic records management system among administrative staff of Public Polytechnics in Edo State.
5. There is significant influence of awareness on the security of electronic records management system among administrative staff of Public Polytechnics in Edo State.

5.2 Conclusion

The aim of this research was to investigate the influence of awareness on the use and security of electronic records management system among Public Polytechnics in Edo State.

Public Polytechnics in Edo State have high levels of awareness of ERMS which includes perception, comprehension and projection. There is also high levels of use of ERMS which includes frequency of use, purpose of use and specific time spend on each use. The level of security which includes confidentiality, integrity and availability of ERMS is moderately high. The nature of awareness, use and security of electronic records management system are important when determining the success of polytechnics. The need to improve the electronic records management system and

security of polytechnics to promote best practices in records management is very important. On the other hand, the integrity of data on ERMS affects operational efficiency and the quality of decisions. The authenticity and integrity of ERMS enable polytechnics to achieve their stated goals. The study concluded that despite commendable levels of awareness and use of electronic document management, significant challenges remain, particularly in the area of security. The potential risks associated with unauthorized access and data breaches highlight the need to strengthen security measures in electronic records management system.

5.3 Recommendations

Based on the findings and conclusion reached in this study, the following recommendations are considered applicable:

1. Management of public polytechnics in Edo State should organize sensitization seminars and workshops on the awareness of electronic records management system so as to enable all the employees dealing with records management to be aware of the digital means as well as the traditional method. Also, a community of practice should be established to facilitate ongoing dialogue and knowledge exchange in the field.
2. Management of public polytechnics in Edo State should implement comprehensive training programmes to improve employees' skills on the use of electronic records management as well as fight resistance to change by providing hands-on training sessions.
3. Security measures and security protocols should be strengthened including access control, encryption and regular security audits, to protect electronic records from

unauthorized access and potential violations. A robust incident response plan should be established to quickly minimize the impact of security incidents.

4. Advanced technological integration should be explored and applied such as block chain, to improve the security and integrity of electronic documents as well as regularly update and upgrade ERMS to incorporate the latest features and security fixes.
5. Collaboration and information sharing should be encouraged across educational institutions to learn from best practices and solve electronic records management system challenges.

5.4 Contribution to knowledge

The study on the awareness, use and security of electronic records management system (ERMS) among administrative staff of Public Polytechnics in Edo State contributes significantly to the existing knowledge base in several key areas such as conceptual, theoretical and empirical reviews.

Conceptually, the study has reviewed relevant literatures to show the gap in the existing body of knowledge and has come up with a conceptual framework unique to this study which can be adopted by researchers for future work.

Theoretically, the study has examined various theories in relation to use, security and awareness of electronic records management system among administrative staff thereby explaining the application of the theories. In relation to the dynamics of awareness, the research sheds light on the distinctive levels of awareness among staff

and administrators in Edo State polytechnics. Also, the introduction of SAT into the discourse of office administration is novel.

Empirically, contextualizing the findings for Edo State within the Nigerian State, the study's focus on Edo State polytechnics provides context-specific insights that contribute to a more comprehensive understanding of electronic records management practices in the Nigerian educational landscape. These findings are crucial for policymakers, administrators and practitioners seeking to address region-specific challenges and opportunities.

In summary, this research contributes to the broader knowledge base by offering insights into the dynamics of ERMS awareness, utilization and security within the unique context of polytechnics in Edo State. The findings and recommendations provide a valuable resource for practitioners, researchers and policymakers working to optimize electronic records management systems in educational institutions.

5.5 Suggested Areas of Further Research

The current study on the awareness, use and security of electronic records management system (ERMS) among administrative staff of Public Polytechnics in Edo State provides a foundation for future research. The following areas represent potential avenues for further investigation:

1. The present study was carried out in the two public polytechnics in Edo State. Further studies in the area of Awareness, Use and Security of ERMS among administrative staff can as well be carried out in the Public Universities in Edo State so as to extend the knowledge gained from this work to the universities.

2. Extend the research to encompass a comparative analysis across all the tertiary institutions (both public and private) in Edo State. Investigate variations in ERMS awareness, utilization and security measures to identify institutional-specific factors that influence electronic records management practices.
3. A descriptive survey research design was used in the course of this study. Further study may consider cross-sectional survey design which will further broaden the knowledge of the researcher.
4. This study employed primary data for collection of data from the selected tertiary institutions. Same study may be carried out in the nearest future using the secondary data for collection of information. Also, sample sizes involving public polytechnics of other geographical regions in Nigeria can be used for better generalization of findings.
5. This study investigated awareness, use and security of ERMS among administrative staff of Public Polytechnics in Edo State. A comparative study on awareness, use and security of ERMS among secretaries with business organizations in Edo State may be considered in the nearest future.
6. Examine the influence of emerging technologies such as artificial intelligence and machine learning on the evolution of ERMS. Investigate how these technologies can be integrated to enhance security measures, automate record-keeping processes and improve the overall functionality of ERMS.

By delving deeper into these areas of further research, scholars can contribute to a more understanding of the challenges and opportunities surrounding the use, security and awareness of electronic records management systems in polytechnics in Edo State in particular and other tertiary institutions in Nigeria in general. This expanded

knowledge base can inform practical interventions, policy development and technological advancements in the field of electronic records management system.

Bibliography

Books

- Andress, J. *Foundations of Information Security: A Straightforward Introduction*. No Starch Press.. 2019
- Banbury, S. & Tremblay, S. *A Cognitive Approach to Situation Awareness: Theory and Application*, Aldershot, UK: Ashgate Publishing, 2017, 317–341.
- Bandura, A. *Social Cognitive Theory: An agentic Perspective on Human Nature*. John Wiley & Sons. 2023
- Beckers, K. *Pattern and Security Requirements: Engineering-Based Establishment of Security Standards*, Springer, 2015, 100. ISBN 9783319166643.
- Bhana, C. *The Changing Organization and Management of Local Government*, Ibadan: Macmillan Publishers, 2018.
- Blum, D. *Identify and Align Security-Related Roles, Rational Cyber security for Business*, Berkeley, CA: Apress, 2020, 31–60, doi:10.1007/978-1-4842-5952-8_2, ISBN 978-1-4842-5951-1, S2CID 226626983
- Cherdantseva, Y. & Hilton, J. *The Survey of Information Security and Information Assurance Professionals*, In: Organizational, Legal, and Technological Dimensions of Information System Administrator. Almeida F., Portela, I. (eds.). IGI Global Publishing, 2013.
- González-Masip, J. J. *Mapping Knowledge Management for Sustainability and Information Technology: Trends and Opportunities. In Cases on Enhancing Business Sustainability Through Knowledge Management Systems* IGI Global. 2023pp. 1-31.
- Marikyan, D., & Papagiannidis, S. *Technology Acceptance Model*. 2023. TheoryHub Book.
- Cox, T. *Closing an era: Historical perspectives on modern archives and records management (No. 35)*. Greenwood Publishing Group. 2013
- Dollar, C. M. *Authentic electronic records strategies for long-term access*, Chicago, IL: Cohasset Associates, 23, 2000, 47-50.

- Theoharakis, V., & Mylonopoulos, N. *The Technology Acceptance Model (TAM): Antecedents and Consequences*. In *The SAGE Handbook of Digital Marketing 2022*, pp. 100-117. SAGE Publications.
- Endsley, M. *Direct Measurement of Situation Awareness: Validity and Use of SAGAT*, In *Situational Awareness*, Routledge, 2017, 129-156.
- Iwhiwhu, B. E. *Management of records in Nigerian universities: Problems and prospects, the electronic library* 23(3), 2015, 345-355. DOI:10.1108/02640470510603741
- Katuu, S. *Enterprise Content Management Implementation: An Overview of Phases, Standards and best practice guidelines*, *Information World/Bilgi Dunyasi*, 13(2), 2012b, 457-476.
- Katuu, S. & Ngoepe, M. *Managing Digital Records in a South African Public Sector Institution*, *INFuture 2015: e-Institutions – Openness, Accessibility, and Preservation*, Zagreb, Croatia, 2015.
- Kanyenze, G., Kondo, K. & Martens, J. *The search for sustainable human development in Southern Africa*, Harare: AN, 2016.
- Kim, B. O. *Referential Integrity for Database Design*. In *Handbook of Data Management 1999 Edition* 2021. pp. 225-232. Auerbach Publications.
- Kerstin, F. *Knowledge Potential Measurement and Uncertainty*, Deutscher Universitätsverlag, 2014. ISBN 978-3-322-81240-7. OCLC 851734708.
- Keyser, T. Security Policy, *The Information Governance Toolkit*, CRC Press, 2018, 57–62. doi:10.1201/9781315385488-13, ISBN 978-1-315-38548-8
- Lawrence, U. C. *Computer Made Easy*, Nkpor: Sir Law Publishing Co., 2010.
- Lepp, A., Barkley, J. E., Karpinski, A. C., & Singh, S. *College Students' Multitasking Behavior in Online Versus face-to-face courses*. *Sage Open*, 9(1), 2019, 2158244018824505.
- Mi, C. T. *Managing Change Case Study: HAMK University of Applied Sciences, Valkeakoski, Hämeenlinna*: HAMK University of Applied Sciences, 2012.
- Mnjama, N. *The Records Management Paradigm Shift: Problems and Prospects in East and Southern Africa*, In *Concepts and Advances in Information Knowledge Management*, Chandos Publishing, 2014, 49-71.
- Nolan, R. L. *Information Technology Management from 1960–2000*, Harvard Business School, Boston, 2001.

- Nisson, C., & Earl, A. *The Theories of Reasoned Action and Planned Behavior*. The Wiley encyclopedia of health psychology, 2020, 755-761.
- O'Brien, J. A. & Marakas, O. *Management Information Systems*, McGraw-Hill/Irwin, 7th ed., 2017. ISBN-10: 007293588X.
- Oliverio, M. E., Pasewark, W. R. and White, B. R. *The Office, Procedures and Technology*, (South-Western Educational Publishing; New York, 2015, p. 545-547.
- Perrin, C. *The CIA Triad*, 2008.
- Robeck, M. F., Brown, G. F. & Stephens, D. O. *Information and records management: Document-based information systems* (4th ed.). New York: McGraw-Hill, 2002, 5-6.
- Sandhu, R. & Sushil, J. *Relational Database Security, Information Security Management Handbook, Four Volume Set, Auerbach Publications*, 2020. doi:10.1201/9780203325438.ch120, ISBN 978-0-8493-1068-3
- Singh, R., & Ramdeo, S. *Employee Motivation in a Changing Environment. In Contemporary Perspectives in Human Resource Management and Organizational Behavior: Research Overviews and Gaps to Advance Interrelated Fields* Cham: Springer International Publishing. 2023, 191-208.
- Sebina, P. M. & Zulu, S. F. *Botswana's E-government Programme: The Case for a Multi-stakeholder E-trust Model*, In P. M. Sebina, K. H. Moahi, & K. J. Bwalya, *Digital Access and E-government: Perspectives from Developing and Emerging Countries*, Hershey: Information Science Reference, 2019, 211-234.
- Sharma, S. K. *Adoption of e-government services: The role of service quality dimensions and demographic variables*, *Transforming Government: People, Process and Policy*, 9(2), 2015, 207-222.
- Shepherd, E. *Tradition and Position in England*, in Butikofer, N. Hofman, H. and Ross, S. (eds), *Managing and Archiving Records in the Digital Era*, 2016.
- Szendrey, J. *Dealing with the Highly Complex and Disorderly Changing Business Environment in the Age of Rapid Decision Making*. TAF, Glasgow, United Kingdom. 2021
- Sim, J. *Guideline on implementing an EDRMS*, Elanora: Records Solutions, 2010.
- Sutton, M. J. D. *Document Management for the Enterprise: Techniques and Applications*, John Wiley & Sons, Inc., New York. 2016
- Tilton, R. S. & Rigby, S. *The Electronic Office: Procedures and Administration*, New York:

South-western Educational, 2014.

Tsabedze, V. W. *Managing Electronic Records in Higher Education Institutions*, In book: Management Training Programs in Higher Education for the Fourth Industrial Revolution, 2020, 36-61.

Saffady, W. *Records and Information Management: Fundamentals of Professional Practice*. Rowman & Littlefield.2021

Uerz, D., Volman, M. &Kral, M. *Teacher Educators' Competences in Fostering Student Teachers' Proficiency in Teaching and Learning with Technology: An Overview of Relevant Research Literature*, Teaching and Teacher Education, 70, 2018, 12-23.

Zulu, S. F., Sebina, P. M., Grand, B. &Mutula, S. M. *Benchmarking Botswana's E-government Initiatives with WSIS Principles: A Review of Progress and Challenges*, In K. J. Bwalya, & S. F. Zulu, Handbook of Research on E-Government in Emerging Economies: Adoption, E-Participation, and Legal Frameworks, Hershey: Information Science Reference, 2012, 237-262.

Conference/Proceedings

Chen, X. C., Zhao, Z. & Liao, Y. *The Antecedents of Information System Success: From an Innovation Implementation Perspective*, Proceedings of 20th International Conference on Industrial Engineering and Engineering Management, Springer, 2013, 905–914.

Keakopa, S. M. *Management of electronic mail: a challenge for archivists and records managers in Botswana, Namibia and South Africa*, Paper presented at the XIX Bi-Annual East and Southern Africa Regional Branch of the International Council on archives (ESARBICA) General Conference on Empowering Society with Information: The Role of Archives and Records as Tools of Accountability, June 18-22, 2017, Dar es Salaam, Tanzania.

Hawash, B., Mokhtar, U. A. & Yusof, M. Z. *The Primarily study of Electronic Records Management System (ERMS) for Yemen Oil and Gas Corporation (YOGC) Subsidiaries*, in Proc. of 2019 International Conference on Cyber security (ICoCSec), 2019, 13-19.

Nguyen, L. T., Swatman, P. M. &Fraunholz, B. *EDMS, ERMS, ECMS or EDRMS: fighting through the acronyms towards a strategy for effective corporate records management*, Paper presented at the 18th Australasian Conference on Information Systems, Toowoomba, available at: <http://dro.deakin.edu.au/eserv/DU:30008058/fraunholz-edmsermsecms-2007.pdf>

Popoola, S. O. *Records survey and security of public records. Paper presented at National Training Workshop on Records Management organized by the Office of Civil Service of the Federation, Establishment and Pensions Office for Desk/Schedule Officers on*

(GL. 12-14) in *Nigerian Public Service*, Ijaiye-Ogba, Ikeja, Lagos, 25-30 September, 2000.

Ohta, M. & Takeo, F. *Iterative Cooperation Sensing on Shared Primary Spectrum for Improving Sensing Ability*, 2011 *Ieee International Symposium on Dynamic Spectrum Access Networks (Dyspan)*, IEEE, 2011, 623–627. doi:10.1109/dyspan.2011.5936257. S2CID 15119653

Sandhu, R. S. *Role Hierarchies and Constraints for Lattice-based Access Control*, in Proceedings of the 4th European Symposium of Research in Computer Security, Italy, 2009.

Zhang, J., Wang, Q., Pan, Y. & Liu, X. *Research on Archives Information Management System based on Computer Big Data*, Proceedings of the IEEE International Conference on Power Electronics, Computer Applications, 2021, 729–732. <https://doi.org/10.1109/ICPECA51329.2021.9362505>

Internet Resources

Abdullah, L. *Records & Information Management (RIM) - ARMA International*, 2017. www.arma.org

Adekannbi, J. O., & Wahab, F. W. *Comparative Analysis of the Preservation and Conservation Techniques of Selected Special and Academic Libraries in Nigeria*. 2015 [https://doi.org/10.1016/S0140-6736\(04\)17482-5](https://doi.org/10.1016/S0140-6736(04)17482-5).

Coffman, J. M., Spetz, J., Grumbach, K., Iix, M., & Bindman, A. B. *Electronic Health Record Availability among Advanced Practice Registered Nurses and Physicians*. 2014.

National Archive of Scotland. *Records Management*. 2017
<http://www.nas.gov.uk/recordKeeping/recordsManagement.asp>

Records and Information Management Awareness Foundation, (RIMA) Foundation 2019, president@rimaw.org

Journals

Abdullah, A. L., Mohammad Yusof, Z., & Mokhtar, U. A. *Factors influencing the Implementation of Electronic Records and Information Management: A Case Study in Military Service in Malaysia*. **Records Management Journal**, 30(1), 2020, 81-99.

Adade, A., Quashigah, A. Y. & Eshun, P. *Academic Records Management in Ghanaian Basic Schools: A Study of Basic Schools in the Ashiedu Keteke Sub-Metropolitan in the Greater Accra Region*, **British Journal of Education**, 6(4), 2018, 33–49.

- Adetunla, G. B. O., & Osunride, A. A. *Security Control and Disaster Preparedness As Panacea for Preservation and Conservation Practices In University Libraries in South West, Nigeria*. **International Journal of Online and Distance Learning**, 1(1), 2016, 26—35..
- Adeyanju, J. *Electronic Record Management System and Efficiency in the University of Lagos, Nigeria*. **Sokoto Educational Review**, 19(1), 2020, 1-10. <https://doi.org/10.35386/ser.v19i1.243>.
- Adu, K. K. & Ngulube, P. *Key threats and challenges to the preservation of digital records of public institutions in Ghana*, **Information, Communication & Society**, 20(8), 2017, 1127- 1145.
- Alegbeleye, G. O., & Chilaka, U. C. *Evaluation of Records Management Practices at the Ministry of Health, Abia State, Nigeria*. **Library Philosophy and Practice**, 2019, 1-21.
- Archibong, U., & Ibrahim, U. A. *Assessing the Impact of Change Management on Employee Performance: Evidence from Nile University of Nigeria*. **International Journal of Research in Business and Social Science** (2147-4478), 10(4), 2021, 525-534.
- Ambira, C. M., Kemoni, H. M. & Ngulube, P. *A Framework for Electronic Records Management in Support of e-government in Kenya*, **Records Management Journal**, 29(3), 2019, 305-319.
- Aziz, A. A., Yusof, Z. M., Mokhtar, U. A. & Jambari, D. I. *Establishing Policy for the Implementation of Electronic Document and Records Management System in Public Sector in Malaysia: The Influencing Factors*, **Advanced Science Letters**, 23(11), 2017, 10732-10736.
- Bakare-Fatungase D, O., & Oseni, S. *Use of Electronic Records Management System on Administrative Staff Performance in Public Polytechnics, Edo State, Nigeria*. **Lead City International Journal of Library, Information & Communication Sciences**, 1(2), 2024, 224-243.
- Bahri, A. N. B., Wan, W. M. I. Z. B., Aris, M. H. B., Azaham, N. F. B. M., & Hashim, W. N. S. W., *Issues and Challenges in Record Management: The Adoption of ERMS*. **International Journal of Accounting, Finance and Business**, 7(42). 2022
- Ukata, P. F., & Wechie, N. *Electronic Records Management and National Development: A Case of Nigeria*. **International Journal of Social Sciences and Management Research**, 5(2), 2019, 35-57.
- Stoel, M. D., & Havelka, D. *Information Technology Audit Quality: An Investigation of the Impact of Individual and Organizational Factors*. **Journal of Information Systems**, 35(1), 2021, 135-154..

- Emon, M. M. H. *Insights Into Technology Adoption: A Systematic Review of Framework, Variables and Items*. **Information Management and Computer Science**, 6(2), 2023, 27-33.
- Chaokromthong, K. & Sintao, N. *Sample Size Estimation using Yamane and Cochran and Krejcie and Morgan and Green Formulas and Cohen Statistical Power Analysis by G Power and Comparisons*, **APHEIT International Journal**, 10(2), 2021, 76-86.
- Giba-Fosu, N. *Records Management Programs in Higher Learning Institution: Case Study of Nelson Mandela Drive Campus Walter Sisulu University, South Africa*. **International Journal of Community Development and Management Studies**, 4, 2020, 023-039.
- Coraiola, D. M., Foster, W. M., Mena, S., Foroughi, H., & Rintamäki, J. *Ecologies of Memories: Memory Work within and between Organizations and Communities*. **Academy of Management Annals**, 17(1), 2023, 373-404.
- Chaputula, A. H. *E-records Management Practices in Public Universities: A Developing Country Perspective*, **Records Management Journal**, 32(3), 2022, 213-230. <https://doi.org/10.1108/RMJ-06-2021-0027>
- Chauhan, S. & Jaiswal, M. *Determinants of Acceptance of ERP Software training in Business Schools: Empirical Investigation using UTAUT Model*, **The International Journal of Management Education**, 14(3), 2016, 248-262.
- Clemence, O., Luambano, I., & Mwantimwa, K. *Adoption and Application of Electronic Records Systems in Higher Learning Institutions*, **Information Development**, 2(1), 2023, 96-117.
- Compeau, D., Correia, J., & Bennett Thatcher, J. *When Constructs Become Obsolete: A Systematic Approach to Evaluating and Updating Constructs for Information Systems Research*. **MIS Quarterly**, 46(2). 2022
- Chen, M., Cao, Y., & Liang, Y. *Determinants of Open Government Data Usage: Integrating trust Theory and Social Cognitive Theory*. **Government Information Quarterly**, 40(4), 2023, 101857.
- Davis, F. D. *User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts*, **International Journal of Man-Machine Studies**, 38(3), 1993, 475-487.
- Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. *Perceived Ease of Use, Perceived Usefulness, Perceived Security and Intention to Use e-filing: The Role of Technology Readiness*. **The Journal of Asian Finance, Economics and Business**, 7(9), 2020, 537-547.

- Nasrullah, M., Amir, R. F. P., & Saleh, S. *Effectiveness of Archive Management at the Food Security Office of South Sulawesi Province*. **Pinisi Journal of Officers Review**, 1(1), 2024, 11-16.
- De Mingo, C. A. & Cerrillo-i-Martínez, A. *Improving records management transparency and prevent corruption*. **International Journal of Information Management**, 38(1), 2018, 256-261.
- Brooks, J.. *Perspectives on the Relationship Between Records Management and Information Governance*. **Records Management Journal**, 29(1/2), 2019, 5-17.
- Effiong, A. N. *Policy Implementation and its Challenges in Nigeria*. **International Journal of Advanced Legal Studies and Governance**, Vol. 4, No. 3. 2013.
- Luyombya, D., & Ndagire, S. *Records Management Procedures and Service Delivery in Private Universities: A Case Study of the Islamic University in Uganda*. **Journal of the South African Society of Archivists**, 53, 2020, 1-19.
- Earl, M. J. *Experience in Strategic Information Systems Planning*, **MIS Quarterly**, 2013, 1–21.
- Falolo, V. M., Capillas, K. T., Vergarra, N. A. & Cerbito, A. F. *Student Registration and Records Management Services towards Digitization*, **International Journal of Educational Management and Development Studies**, 3(1), 2022, 149-165.
- Goudarouli, E., Sexton, A., & Sheridan, J. *The Challenge of the Digital and the Future Archive: through the Lens of the National Archives UK*. **Philosophy & Technology**, 32, 2019, 173-183.
- Farrell, M., Gordijn, B., & Kearns, A. J. *Accountability, Human Rights and Social Justice in Public Sector Recordkeeping*. **Archival Science**, 23(2), 2023, 161-185.
- Gaglio, C. Kraemer-Mbula, E. & Lorenz, E. *The Effects of Digital Transformation on Innovation and Productivity: Firm-level Evidence of South African Manufacturing Micro and Small Enterprises*, **Technological Forecasting and Social Change**, 182, 2022, 121785. <https://doi.org/10.1016/j.techfore.2022.121785>
- Tsabedze, V. *A Framework for the Management of E-records in Higher Education Institutions: A Case Study of the Institute of Development Management, Eswatini*. **Mousaion**, 37(3). 2019
- Gandomi, A. & Haider, M. *Beyond the hype: Big Data Concepts, Methods, and Analytics*, **International Journal of Information Management**, 35(2), 2015, 137–144. <https://doi.org/10.1016/j.ijinfomgt.2014.10.007>
- Goodhue, D. L. *Understanding User Evaluations of Information Systems*, **Management Science**, 41(12), 1995, 1827-1844.

- Grover, V., Teng, J. T. & Fiedler, K. D. *Information Technology Enabled Business Process Redesign: An integrated planning framework*, **Omega**, 21(4), 1993, 34-51.
- Dasgupta, S., & Gupta, B. *Espoused Organizational Culture Values as Antecedents of Internet Technology Adoption in an Emerging Economy*. **Information & Management**, 56(6), 2019, 103142.
- Hakan and Özlem. *Efficiency of Electronic Records Management Systems: Turkey and Example of Ministry of Development*, **Procedia - Social and Behavioral Sciences** 147: 2014, 189-196.
- Hansen, L. E., & Sundqvist, A. *To Make Archives Available Online: Transcending Boundaries or Building Walls?* **Journal of Archival Organization**, 10(3-4). 2012, 207-230.
- Haraldsdottir, R. K. & Gunnlaugsdottir, J. *The missing link in Information and Records Management: Personal Knowledge Registration*, **Records Management Journal**, 2(1), 2018, 46-58.
- Hassanin, M. E. & Hamada, M. A. *A Big Data Strategy to Reinforce Self-sustainability for Pharmaceutical Companies in the Digital Transformation Era: A Case Study of Egyptian Pharmaceutical Companies*, **African Journal of Science, Technology, Innovation and Development**, 14(7), 2022, 1870–1882. <https://doi.org/10.1080/20421338.2021.1988409>
- Harr, A., Vom Brocke, J., & Urbach, N. *Evaluating the Individual and Organizational Impact of Enterprise Content Management Systems*. **Business Process Management Journal**, 25(7), 2019, 1413-1440.
- Hawash, B., Abuzawayda, Y. I., Mokhtar, U. A., Yusef, Z. & Mukred, M. *Digital Transformation in the Oil and Gas Sector during Covid-19 Pandemic*, **International Journal of Management**, 11(12), 2020, 725–735. <https://doi.org/10.34218/IJM.11.12.2020.067>
- Hawash, B., Mukred, M., Mokhtar, U. A., & Nofal, M. I. *The Influence of Big Data Management on Organizational Performance in Organizations: The Role of Electronic Records Management System Potentiality*, **Interdisciplinary Journal of Information, Knowledge, and Management**, 18, 2023, 59-86. <https://doi.org/10.28945/5072>
- Hawash, B., Mokhtar, U. A., Yusof, Z. M. & Mukred, M. *The Adoption of Electronic Records Management System (ERMS) in the Yemeni Oil and Gas Sector: Influencing Factors*, **Records Management Journal**, 30(1), 2020, 1–22. <https://doi.org/10.1108/RMJ-03-2019-0010>
- Hawash, B., Mokhtar, U. A., Yusof, Z. M., Mukred, M. & Ali, W. *Intention to Adopt*

Electronic Records Management System in the Oil and Gas Sector in Yemen, **International Journal of Advanced Trends in Computer Science and Engineering**, 9(5) 2020, 6959-6971.

Hawash, B., Mokhtar, U. A., Yusof, Z. M. & Mukred, M. *Enhancing Business Continuity in the Oil and Gas Industry through Electronic Records Management System Usage to improve Off-site Working: A Narrative Review*, **Journal of Information Science Theory and Practice**, 10(2), 2022, 30–44. <https://doi.org/10.1633/JISTaP.2022.10.2.3>

Hryshko, I. *Unauthorized Occupation of Land and Unauthorized Construction: Concepts and types of Tactical Means of Investigation*, **International Humanitarian University Herald Jurisprudence**, 43, 2020, 180–184.

Hu, P. J., Chau, P. Y., Sheng, O. R. & Tam, K. Y. *Examining the Technology Acceptance Model Using Physician Acceptance of Telemedicine Technology*, **Journal of Management Information Systems**, 16(2), 1999, 91-112.

Ile, C. M. & Ojohwhoh, D. R. *Extent of Adoption of Electronic Records Protection Practices in Polytechnics in Edo and Delta States*, **ISJASSR**, 2(4), 2020, 40-48. ISSN: 2507 - 1528.

Irenoa, K. O., Tijani, R. I., & Bakare, O. *Enhancing library services delivery in the 21st century in Africa: The role of cloud technologies*. **International Journal of Library and Information Science Studies**, 4(4), 2018, 1-9.

Issa, M. & Wamukoya, J. *The Role of Electronic Records Management in Promoting the Delivery of Justice in Tanzania: Perspectives from Dar es Salaam*, **Information and Knowledge Management**, 8(2), 2018, 30–35.

Johnston, S. & Bowen, M. *The Benefits of Electronic Records Management Systems: A general review of published and some unpublished cases*, **Records Management Journal**, 15(3), 2015, 131-140.

Joshi, C. & Singh, U. K. *Information Security Risks Management Framework – a step towards mitigating security risks in University network*, **Journal of Information Security and Applications**, 35, 2017, 128-137. doi:10.1016/j.jisa.2017.06.006. ISSN 2214-2126.

Junco, R. *Comparing actual and self-reported measures of Facebook use*, **Computers in Human Behavior**, 29(3), 2013, 626–631.

Karahanna, E., Straub, D. W. & Chervany, N. L. *Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs*, **MIS Quarterly**, 23(2), 2009, 183.

Karunagaran, S., Mathew, S. K. & Lehner, F. *Differential Cloud Adoption: A Comparative*

Case Study of Large Enterprises and SMEs in Germany, Information Systems Frontiers, 21(4), 2019, 861–875.

- Kassab, M. K. I., Abu-Naser, S. S. & Al Shobaki, M. J. *An Analytical Study of the Reality of Electronic Documents and Electronic Archiving in the Management of Electronic Documents in the Palestinian Pension Agency (PPA)*, **European Academic Research**, 4(12), 2017, 10052-10102.
- Katuu, S. *Assessing the Functionality of the Enterprise Content Management Maturity Model*, **Records Management Journal**, 26(2), 2016a, 218-238.
- Katuu, S. *Enterprise Content Management (ECM) Implementation in South Africa*, **Records Management Journal**, 22(1), 2012a, 37-56. DOI:10.1108/09565691211222081
- Kent, D. & Sheridan, T. *Market Reactions to Tangible and Intangible Information*, **The Journal of Finance**, 61(4), 2006, 1605–1643. doi:10.1111/j.1540-6261.2006.00884.x. SSRN 414701.
- Albrecht, S. L., Connaughton, S., Foster, K., Furlong, S., & Yeow, C. J. L. *Change Engagement, Change Resources, and Change Demands: A Model for Positive Employee Orientations to Organizational Change*. **Frontiers in Psychology**, 11, 2020, 531944.
- Lejun, F., Yuanzhuo, W., Xueqi, C., Jinming, L. & Shuyuan, J. *Privacy theft malware multi-process collaboration analysis.*, **Security and Communication Networks**, 8(1), 2013, 51–67. doi:10.1002/sec.705. ISSN 1939-0114.
- Leonard-Barton, D. & Deschamps, I. *Managerial Influence in the Implementation of New Technology*, **Management Science**, 34(10), 1988, 1252-1265.
- Liew, C. L. & Chawner, B. *The Management and the Usage of Electronic Resources in Academic Libraries: A Bi-directional Relationship*, **Information Development**, 38(1), 2022, 114-124. <https://doi.org/10.1177/0266666920983600>
- Kaur Chahal J., A., Bhandari, & S. Behal, *Distributed denial of service attacks: a threat or Challenge*. **New Review of Information Networking**, 24(1), 2019, 31-103.
- Upward F., B., Reed, G., Oliver, & J. E. Clayton, *16 Recordkeeping Informatics for a Networked Age*. **The American Archivist**, 82(1). 2019
- Malanga, D. F. & Kamanga, B. C. G. *E-records readiness at Karonga District Council in Malawi: Applying IRMT E-Records Readiness Assessment Framework*, **Information Development**, 2019, 1–10. DOI: 10.1177/0266666918766971
- Malekani, A. & Alphonse, A. B. *Assessing the Efficacy of Electronic Document Management System in Records Management at Sokoine University of Agriculture*, **Library Philosophy and Practice (e-journal)**, 2022, 7417. <https://digitalcommons.unl.edu/libphilprac/7417>

- Thabakgolo, M., &Nsibirwa, Z. *The Value Accorded to Electronic Records as a Reflection of Information Culture among Selected Parastatals in Botswana*. **Journal of the South African Society of Archivists**, 55, 2022, 56-73.
- Metto, E., Mwita, M. & Benson, N. K. *A Study of the Management of Student Records in Academic Registrars' Offices in Kenyan Universities*, **African Journal of Empirical Research**,3(1), 2022, 68–77. <https://doi.org/10.51867/ajernet3.1.8>
- Moalthodi, T. M. &Kalusopa, T. *Assessment of e-records readiness at the Ministry of Labour and Home Affairs, Gaborone, Botswana*, **Mousaion**, 34(3), 2016, 1-22.
- Hassan Dotto, M., &Mwantimwa, K. *Electronic records management in Tanzanian courts*.**Information Development**, 40(1), 2024, 131-146.
- Mohammadpoor, M, & F., Torabi. *Big Data Analytics in Oil and Gas Industry: An Emerging Trend*, **Petroleum**, 6(4),2020, 321–328. <https://doi.org/10.1016/j.petlm.2018.11.001>
- Zehir, C. *Personal Innovativeness and Perceived System Quality for Information System Success: The Role of Diffusability of Innovation*.**Tehničkivjesnik**, 28(5), 2021, 1717-1726.
- Ngoepe, M. *Managing Digital Records in Africa*. 2023, Taylor & Francis.
- Mahfuz, M. A., & Mohammad Abdullah, M. A. *Employee Acceptance of Knowledge Management Systems in Bangladesh: Integrating UTAUT and KMS Diffusion Model*. 2020
- Magawi, S., Mathangani, S., &Owano, A. *Harmonising the Undergraduate Records Management Curriculum and the Labour Market in Kenya*. **Mousaion**, 39(4). 2021
- Muhenda, M. B. & Lwanga, E. K. *Managing Records in Higher Education Institutions in Uganda: Can Human Resource Policies Salvage the Situation?*,**World Journal of Social Sciences**, 2(2), 2012, 74-83.
- Ayaz, A., &Yanartaş, M. *An analysis on the Unified Theory of Acceptance and Use of technology theory (UTAUT): Acceptance of Electronic Document Management System (EDMS)*.**Computers in Human Behavior Reports**, 2, 100032. 2020
- Mukred, M., Yusof, Z. M. & Alotaibi, F. M. *Ensuring the Productivity of Higher Learning Institutions Through Electronic Records Management System (ERMS)*, **IEEE Access**, 7, 2019, 97343-97364.
- Mukred, M., Zawiyah, M. Yusof, Z. M., Fahad, M. & Alotaibi, U. *Guaranteeing the Productivity of Higher Learning Institutions through Electronic Records Management System (ERMS)*, **IEEE Access**,20, 2017, 1-23. DOI 10.1109/ACCESS.2019.2927614
- Mukred, M., Yusof, Z. M., Mokhtar, U. A. &Fauzi, F. *Taxonomic Framework for Factors*

- Influencing ERMS Adoption in Organizations of Higher Professional Education*, **J. Inf. Sci.**, 45(2), 2019, 139–155.
- Mukred, M., Yusof, Z. M., Mokhtar, U. A. & Manap, N. A. *Electronic Records Management System Adoption Readiness Framework for Higher Professional Education Institutions in Yemen*, **International Journal on Advanced Science, Engineering and Information Technology**, 6(6), 2016, 804-811.
- Mutsagondo, S. & Ngulube, P. *Skills Impact Assessment of Personnel Managing Electronic Records in Zimbabwe's Public Service*, **Mousaion: South African Journal of Information Studies**, 36, 2018. <https://doi.org/10.25159/2663-659X/3283>
- Nengomasha, C. T. *Managing public sector records in Namibia: a proposed model*. **Information Development**, 25(2), 2009, 112-126
- Nengomasha, C. T., & Chikomba, A. *Status of ERMS Implementation in the Public Sector in Namibia and Zimbabwe*. **Records Management Journal**, 28(3), 2018, 252-264.
- Nguyen, T., Gosine, R. G. & Warriar, P. *A Systematic Review of Big Data Analytics for Oil and Gas Industry 4.0.*, **IEEE Access**, 8, 2020, 61183–61201. <https://doi.org/10.1109/ACCESS.2020.2979678>
- Ngulube, P. *Research procedure used by Master of Information Studies students at the University of Natal in the period 1982-2002 with special reference to their sampling techniques and survey response rate: a methodological discourse*, **The International Information and Library Review**, 37, 2015a, 127-143.
- Nofal, I. M. & Yusof, Z. M. *Taxonomy Framework of ERP Success Usage in SMEs in Middle East Region*, *Journal of Theoretical & Applied Information Technology*, 86(3), 2016, 845-860.
- Nwaomah, A. E. *Records Information Management Practices: A Study on a Faith Based University*, **International Journal for Innovation Education and Research**, 5(11), 2017, 87- 102.
- Odhiambo, B. O. *Institutional Readiness for Digital Archives Management at United States International University-Africa*, **Archives and Manuscripts**, 46(3), 2018, 1-24. DOI:10.1080/01576895.2018.1558407
- Okuonghae, N., & Bakare-Fatungase, O. D. *Cloud Computing: A tool for Effective Records and Information Management System in Nigerian Academic Libraries*. **Folia Toruniensia**, 23, 2023, 35-52.
- Olalekan, R. M. *“What we Learn Today is how we Behave Tomorrow”*: A study on Satisfaction Level and Implementation of Environmental Health Ethics in Nigeria Institutions. **Open Access Journal of Science**, 4(3), 2020, 82-92. DOI: 10.15406/oajs..04.00156. (2020a)

- Olalekan, R. M., Olawale, S. H., Christian, A., & Simeon, A. O. R. M. Olalekan, S. H. Olawale, A. Christian, & A. O. Simeon. *Practitioners Perspective of Ethical Cases and Policy Responses by Professional Regulator: The Case of Environmental Health Officers Registration Council of Nigeria (EHORECON)*. **American Journal of Epidemiology & Public Health**, 4(1), 2020, 016-023. Retrieved from <https://www.scireslit.com/PublicHealth/AJEPH-ID23.pdf>.
- Oguche, D., & Aliyu, A. *Towards a National Framework for Digital Preservation in Nigeria: Technologies and Best Practices*. **Information Impact: Journal of Information and Knowledge Management**, 11(4), 2020, 146-155.
- Oseni, S., Bakare, O. D., & Alli, A. Z. *Impact of Electronic Records Management System on the Security of Records among Administrative Staff*. **Wukari International Studies Journal**, 7(5), 2023, 99-110.
- Ersoy, M., & Kavaklioglu, O. *Attitudes of Turkish Secondary School Teachers Towards Technology*. **Research in Pedagogy**, 10(2), 2020, 324-337.
- Papagiannidis, S. & Marikyan, D. *Smart Offices: A Productivity and Well-being Perspective*, **International Journal of Information Management**, 51, 2020, 102-127.
- Matlala, M. E., & Maphoto, A. R. *Application of the Records Life-Cycle and Records Continuum Models in Organizations in the 21 St Century*. **Esarbica Journal**, 39(1). 2020
- Pevnev, V. *Model Threats and Ensure the Integrity of Information, Systems and Technologies*, 2(56), 2018, 80-95. doi:10.32836/2521-6643-2018.2-56.6. ISSN 2521-6643.
- Phiri, M. J. & Tough, A. G. *Managing University Records in the World of Governance*, **Records Management Journal**, 28(1), 2018, 47-61. doi:10.1108/RMJ-11-2016-0042
- Vasseur, É. *French Archivists, the Management of Records and Records Management since the Nineteenth Century: Are French Recordkeeping Tradition and Practice Incompatible with Records Management?*. **Archives and Manuscripts**, 49(1-2), 2021, 107-132.
- Semanur, Ö. *Usability of Electronic Records Management System (ERMS) of the Turkish Public Universities*, **Türk Kütüphaneciliği**, 33(4), 2019, 282-295. <https://doi.org/10.24146/tk.576165>
- Semantha, F. H., Azam, S., Shanmugam, B., Yeo, K. C. & Beeravolu, A. R. *A Conceptual Framework to ensure Privacy in Patient Record Management System*, **IEEE Access**, 9, 2021, 165667-165689. <https://doi.org/10.1109/ACCESS.2021.3134873>

- Hunter, J., Porter, M., & Williams, B. *Towards a Theoretical Framework for Situational Awareness in Paramedicine*. **Safety science**, 122, 2020, 104528.
- Effendi, I., Murad, M., Rafiki, A., & Lubis, M. M. *The Application of the Theory of Reasoned Action on Services of Islamic Rural Banks in Indonesia*. **Journal of Islamic Marketing**, 12(5), 2021, 951-976.
- Shonhe, L. & Grand, B. *Implementation of Electronic Records Management Systems*, **Records Management Journal**, 2020, ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/RMJ-03-2019-0013>
- Solomon, A. O., & Bakare, O. *Application of Cloud Computing To Library Processes: The Nigerian Perspective*. **Journal of Research in Humanities and Social Science**, 10(7), 2022, 1-7.
- Taiwo, B. I. *Electronic Records Management Implementation: Factors Affecting Organizational Readiness*, **Information and Knowledge Management**, 9(6), 2019, 1-14.
- Taharudin, N. S., & Izhar, T. A. F. *A Study on Record Management Implementation in Private Sector: Analysis on Competency, Storage and Retention*. **International Journal of Academic Research in Business and Social Sciences**, 8(6), 2018, 882-897.
- Tanwar, S., Parekh, K., & Evans, R. *Blockchain-based Electronic Healthcare Record System for Healthcare 4.0 Applications*. **Journal of Information Security and Applications**, 50, 102407. 2020
- Mahmood, F., Khan, A. Z., & Bokhari, R. H. *ERP Issues and Challenges: A Research Synthesis*. **Kybernetes**, 49(3), 2020, 629-659.
- Taylor, S. & Todd, P. A. *Understanding Information Technology Usage: A Test of Competing Models*, **Information Systems Research**, 6(2), 2017, 144-176.
- Henne, A., Möhrke, P., Huwer, J., & Thoms, L. J. *Finally Digital Natives? Changes in Media Use among Science Students during the COVID-19 Pandemic*. **Education Sciences**, 14(6), 2024, 555.
- Thompson, R. L., Higgins, C. A. & Howell, J. M. *Personal Computing: Toward a Conceptual Model of Utilization*, **MIS Quarterly**, 15(1), 1991, 125.
- Touray, R. *A Review of Records Management in Organizations*, **Open Access Library Journal**, 8(1), 2021, 1-23. DOI: 10.4236/oalib.1108107.

- Mabera, S. U. *Implications of Poor Management of Students' Academic Records in Nigerian Universities. Information Impact: Journal of Information and Knowledge Management*, 11(3), 2020, 31-40.
- Luyombya, D., & Ndagire, S. *Records Management Procedures and Service Delivery in Private Universities: A Case Study of the Islamic University in Uganda. Journal of the South African Society of Archivists*, 53, 2020, 1-19.
- Blut, M., Chong, A. Y. L., Tsiga, Z., & Venkatesh, V. *Meta-analysis of the unified Theory of Acceptance and Use of Technology (UTAUT): Challenging its Validity and Charting a Research Agenda in the Red Ocean. Association for Information Systems*. 2022
- Tomer, G., Mishra, S. K., & Qureshi, I. *Features of Technology and its Linkages with Turnover Intention and Work Exhaustion among IT Professionals: A Multi-study Investigation. International Journal of Information Management*, 66, 102518. 2022
- Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. *The Extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature Review and Theory Evaluation. International Journal of Information Management*, 57, 2021, 102269.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N. & Haenlein, M. *Digital Transformation: A Multidisciplinary Reflection and Research Agenda, Journal of Business Research*, 122, 2021, 889-901.
- Verma, V. K. & Nair, A. R. *Implementation of Electronic Resource Management System: A Case Study of Central Library, IIT Delhi, Journal of Information and Knowledge*, 60(3), 2023, 191-197.
- Wahid, K. A., Marzuki, M. M., Rosman, M. R. M. & Zawawi, M. Z. M. *The Effectiveness of Electronic Risk Management System (ERMS): A Study in Malaysian Higher Learning Institution, ABAC Journal*, 42(4), 2022, 153-167. <https://doi.org/10.14456/abacj.2022.58>
- Wang, Y., Cheng, S., Zhang, F., Feng, N., Li, L., Shen, X., Li, J. & Yu, H. *Big Data Technique in the Reservoir Parameters' Prediction and Productivity Evaluation: A Field Case in Western South China Sea, Gondwana Research*, 96, 2021, 22-36. <https://doi.org/10.1016/j.gr.2021.03.015>
- Rafoneke T., & Mnjama N., *Records management practices at the National University of Lesotho. ESARBICA Journal: Journal of the Eastern and Southern Africa Regional Branch of the International Council on Archives*, 38, 2019, 157-193.
- Zimmerman, J. J. *Review of Records and Information Management. Journal of Western Archives*, 10(2), 2019, 5.

Zhang, J. & Mao, E. *Cash, Credit, or Phone? An Empirical Study on the Adoption of Mobile Payments in the United States*, **Psychology & Marketing**, 37(1), 2020, 87-98.

Thesis

Bakare, D. O. *The Use of Social Media Technologies (SMT) among Academic Librarians in South-West, Nigeria*. Department of Information Studies, College of Humanities, School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa. 2017.

Coetzer, X. P. *The Status of Records Management at the University of Zululand, KwaZulu-Natal*: University of Zululand, 2012.

Mwangi, W. G. *An Examination of Records Management Practices for Improved Service Delivery in Laikipia County Government, Kenya* (Doctoral Dissertation, Kisii University). 2017

Ruissalo, M. *Communications as Change Management Vehicles: How to Improve Change Receptivity with Organizational Communications*, Tampere: Tampere University of Applied Sciences, 2015.

Sidikova, M. *The Impact of Change on Employees' Motivation: Case Study - CSSC (Cargotec Shared Service Center)*, Turku: Turku University of Applied Sciences, 2011.

Moatlhodi, T. M. *An Assessment of E-records Readiness at the Ministry of Labour and Home Affairs Headquarters in Botswana, Gaborone*: University of Botswana, 2015.

Ngoako, S. M. *Records Management in Support of Service Delivery in the Public HEALTH SECTOR of the Limpopo Province in South Africa*, Unpublished Masters' Thesis, University of South Africa, 2011.

Packery, R. *Change Management and Communication: Factors Influencing the Successful Communication of Change at a Workplace*, Cape Town: Cape Peninsula University of Technology, 2014.

Munetsi, N. *Investigation into the State of Digital Records Management in the provincial Government of Eastern Cape: A Case Study of the Office of the Premier*, Masters in Library and Information Science (MLIS) thesis, University of Fort Hare, 2011.

Popoola, S. O. *Records management system in the civil service of Oyo State, Nigeria: A cost*

model approach, (Ph.D. thesis, University of Ibadan, Ibadan), 2000.

Mutimba, C. J. *Implementation of Electronic Document and Records Management System in the Public Sector: A Case Study of the Ministry of Higher Education Science and Technology*, Nairobi: University of Nairobi, 2014.

Phiri, M. J. *Managing University Records and Documents in the World of Governance, Audit and risk: Case Studies from South Africa and Malawi* (Doctoral dissertation, University of Glasgow). 2016.

Makhura, M. *The Role of Electronic Records Management in a Service Organization*, MIS Thesis, Johannesburg: Rand Afrikaans University, 2001

Zaman, M. S. *Impact of Perceived Ease of Use and Perceived Usefulness of Enterprise Resource Planning System Adoption on End User Acceptance*. Capital University: Islamabad, Pakistan. 2020

Appendices

Appendix 1 - Questionnaire

Lead City University, Ibadan

Faculty of Communication and Information Sciences,

Department of Information Management

Dear Respondent,

I am a Postgraduate student in the above-named institution, gathering data for academic research titled “Awareness, Use and Security of Electronic Records Management System among Administrative Staff of Public Polytechnics in Edo State, Nigeria”. You have been chosen to take part in this study. Hence, you are required to fill out the questionnaire that is attached in order to participate. Before answering the questions, please take time to properly read the instructions. The questionnaire is

divided into four sections. Please be as truthful as you can when answering the questions. Your responses will be handled with the highest confidentiality and used only for the study.

Your contribution in the study is highly appreciated. Thank you in advance.

Yours faithfully,

Researcher

Section A: Background Information of the Respondents

Instruction: Please, tick (✓) the appropriate answers to the questions asked below:

1. **Gender:** Male () Female ()
2. **Age Range:** 20–30 years () 31–40 years () 41–50 years () 51 years and above ()
3. **Marital Status:** Single () Married () Divorced () Widower () Widow ()
4. **Educational Qualification:** NCE () ND () HND () B.Sc. () M.Sc. () MBA () Others _____
5. **Years of Work Experience:** 1–10 years () 11– 20 years () 21 – 30 years () 31 years and above ()

Section B

Research Question One: What is the level of use (frequency of use of ERMS, purpose of use of ERMS and specific time spent on each use of ERMS) of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State, Nigeria?

Please indicate the extent at which you agree or disagree with each statement in relation to Use of ERMS in your institution.

Lead City University Ibadan DO NOT COPY

4 = Very High Extent; 3 = High Extent; 2 = Low Extent; 1 = Very Low Extent

S/N	To what extent do you agree with the following:	VHE 4	HE 3	LE 2	VLE 1
	Frequency of use of ERMS: The section seeks to elicit the rate of use of ERMS by administrative staff of Public Polytechnics in Edo State.				
1.	ERMS enables me to accomplish tasks quickly.				
2.	ERMS increases efficiency in my work.				
3.	ERMS enhances my work effectiveness.				
4.	ERMS makes my work easier.				
5.	ERMS gives me greater control over my work.				
	Purpose of use of ERMS: The section seeks to elicit the belief that the use of ERMS by administrative staff of Public Polytechnics in Edo State will attain goals in job performance.				
6.	It is easy to get information using ERMS to do what my work.				
7.	My interaction with the ERMS is clear and understandable.				
8.	ERMS is used for day-to-day operational records keeping.				
9.	It is easy to detect and correct errors in student records using ERMS.				
10.	ERMS has availability of technical assistance that is, a specific person (or group) is available for assistance with ERMS difficulties.				
	Specific time spent on each use of ERMS: The section seeks to elicit the exact time devoted to the use of ERMS by administrative staff of Public Polytechnics in Edo State.				
11.	I have the time necessary to use ERMS.				
12.	I spend one hour per day in using ERMS.				
13.	The ERMS is compatible with other systems I use hence, I do not waste too much time.				
14.	I spend less time on ERMS due to my other demanding tasks.				
15.	I have access to a computer/internet anytime I need to use it.				

Research Question Two: What is the level of Security (confidentiality, integrity and availability) of Electronic Records Management System in Public Polytechnics in Edo State, Nigeria?

Please indicate the extent at which you agree or disagree with each statement in relation to Security of ERMS in your institution.

S/N	To what extent do you meet up to the following:	VHE 4	HE 3	LE 2	VLE 1
	Confidentiality of ERMS: The section seeks to ascertain the level of secrecy and use of encryption of ERMS by administrative staff of Public Polytechnics in Edo State.				
1.	Promotes best practices of managing records.				
2.	Ensures security of the database management.				
3.	The system is very compatible with the organizational culture and support.				
4.	Ensures rights and privileges in access to specific database.				
5.	Promotes authenticity and integrity of the system.				
	Integrity of ERMS: The section seeks to ascertain the certainty that the use of ERMS by administrative staff of Public Polytechnics in Edo State will ensure that the record is not tampered with or degraded.				
6.	Data integrity in the ERMS system improves the efficiency of our operations and the quality of our decisions.				
7.	Integrity requires awareness of unclean data from the pre-implementation stage of the ERMS system.				
8.	I understand the concept and the value of integrated data available from the ERMS.				
9.	Integrity requires control of unclean data from the pre-implementation stage of the ERMS system.				
10.	The words and phrases in contents provided by ERMS are consistent				
	Availability of ERMS: The section seeks to ascertain the availability of records only to authorized users by the administrative staff of Public Polytechnics in Edo State.				
11.	ERMS has eased the management and retrieval of information.				
12.	ERMS brings efficiency through time				

	management.				
13.	The information I need to assess is easily available.				
14.	ERMS grants access to data only to the desired users.				
15.	ERMS ensures the safety of stored records.				

Research Question Three: What is the level of Electronic Records Management System awareness among administrative staff of Public Polytechnics in Edo State, Nigeria?

Please indicate the extent at which you agree or disagree with each statement in relation to Awareness of ERMS in your institution.

4 = Strongly Agree; 3 = Agree; 2 = Disagree; 1 = Strongly Disagree

S/N	To what extent do you agree with the following:	SA 4	A 3	D 2	SD 1
	Perception of ERMS: The section seeks to identify the prevailing circumstances as to the need for ERMS by administrative staff of Public Polytechnics in Edo State.				
1.	I sometimes find it difficult getting enough space for my records storage.				
2.	Some of the records I need to work with are sometimes very difficult to locate.				
3.	I sometimes lose track of information relevant for maintaining safety in my work.				
4.	I sometimes lose track of safety due to receiving too much information at the same time				
5.	Some of the information I need to assess safety is presented in a way that makes it difficult to understand				
	Comprehension of ERMS: The section seeks to identify the level of understanding of the prevailing circumstances as to the use of ERMS by administrative staff of Public Polytechnics in Edo State.				
6.	I know how to act to maintain safety.				
7.	It is hard to know which consequences my actions have for safety.				
8.	I know which information is relevant for safety and which information is not relevant for safety.				

9.	I feel confident that I know how to deal with the various adverse incidents that may arise.				
10.	I know which situations in my work involves higher risk than others.				
	Projection of ERMS: The section seeks to make an attempt to predict the current situation into the future as to the use of ERMS by administrative staff of Public Polytechnics in Edo State.				
11.	I plan ahead in order to handle various adverse incident that may arise.				
12.	I notice when an unsafe situation is about to arise at my workplace.				
13.	It is impossible to predict what will happen during an adverse incident.				
14.	I usually know what is going to happen next with regards to safety.				

Lead City University Ibadan DO NOT COPY

Appendix II – SPSS Computation Results (Raw Scores)

Demographic Characteristics of Respondent

	Category	frequency	percentage (%)
Sex	Male	85	38.1
	Female	138	61.9
Age	21 – 30 years	56	25.1
	31 – 40 years	116	52.0
	41 – 50 years	34	15.2
	51 years and above	17	7.6
Marital Status	Single	65	29.1
	Married	136	61.0
	Divorced	14	6.3
	Widower	3	1.3
	Widow	5	2.2
Educational Qualification	NCE	12	5.4
	ND	42	18.8
	HND	91	40.8
	B.Sc	29	13.0
	M.Sc	24	10.8
	MBA	25	11.2
Years of Work Experience	1 – 10 years	95	42.6
	11 – 20 years	87	39.0
	21 – 30 years	23	10.3
	31 years and above	18	8.1

Level of Use of ERMS by Administrative Staff

	VHE		HE		LE		VLE		Mean	SD
	N	%	N	%	N	%	N	%	μ	$\sigma=\sqrt{x}$
Frequency of Use of ERMS										
ERMS enables me to accomplish task quickly.	138	61.9	69	30.9	12	5.4	4	1.8	3.53	0.68
ERMS increases efficiency in my work.	64	28.7	133	59.6	25	11.2	1	0.4	3.17	0.63
ERMS enhances my work effectiveness.	117	52.5	72	32.3	30	13.5	4	1.8	3.35	0.78
ERMS makes my work easier.	69	30.9	107	48.0	41	18.4	6	2.7	3.07	0.77
ERMS gives me greater control over my work.	123	55.2	58	26.0	32	14.3	10	4.5	3.32	0.88
Average Mean									3.29	
Purpose of Use of ERMS										
It is easy to get information using ERMS to do my work.	129	57.8	68	30.5	25	11.2	1	0.4	3.46	0.71
My interaction with ERMS is clear and understandable.	87	39.0	116	52.0	15	6.7	5	2.2	3.28	0.69
ERMS is used for day-to-day operational records keeping.	105	47.1	91	40.8	27	12.1	0	0.0	3.35	0.69
It is easy to detect and correct errors using ERMS.	98	43.9	97	43.5	21	9.4	7	3.1	3.28	0.76
ERMS has availability of technical assistance.	164	73.5	56	25.1	3	1.3	0	0.0	3.72	0.48
Average Mean									3.42	

Specific Time Spent on Each Use

I have the time necessary to use ERMS.	84	37.7	127	57.0	11	4.9	1	0.4	3.32	0.59
I spend 1 hour per day in using ERMS.	103	46.2	111	49.8	6	2.7	3	1.3	3.41	0.61
ERMS is compatible with other systems I use hence, I do not waste too much time.	115	51.6	90	40.4	18	8.1	0	0.0	3.44	0.64
I spend less time on ERM due to my other demanding task.	135	60.5	70	31.4	16	7.2	2	0.9	3.52	0.67
I have access to a computer anytime I need to use it.	110	49.3	90	40.4	20	9.0	3	1.3	3.38	0.70
Average Mean									3.41	
Grand Average Mean									3.37	

Level of Security of ERMS by Administrative Staff

	VHE		HE		LE		VLE		Mean	SD
	N	%	N	%	N	%	N	%		
Confidentiality of ERMS										
Promotes best practices of managing records.	120	53.8	95	42.6	7	3.1	1	0.4	3.50	0.58
Ensures security of the database management.	67	30.0	137	69.1	17	7.6	2	0.9	3.21	0.61
The system is compatible with organizational culture										

and support. 132 59.2 69 30.9 21 9.4 1 0.4 3.49 0.68

Ensures rights and privileges

in access to specific data. 110 49.3 95 42.6 18 8.1 6 2.7 3.41 0.64

Promotes authenticity and

integrity of the system. 120 53.8 84 37.7 18 8.1 1 0.4 3.45 0.66

AverageMean 3.49

Integrity of ERMS

Data integrity in ERMS improves

efficiency of our operations and

the quality of our decisions. 132 59.2 74 33.2 14 6.3 3 1.3 3.50 0.68

Integrity requires awareness of

unclean data from the pre-

stage of the ERMS. 81 36.3 126 56.5 13 5.8 3 1.3 3.28 0.63

I understand the concept

and value of integrated data

available from the ERMS. 132 59.2 60 26.9 26 11.7 5 2.2 3.43 0.78

Integrity requires control of

unclean data from the pre-

stage of the ERMS. 149 66.8 64 28.7 8 3.6 2 0.9 3.25 0.60

The words and phrases provided

by ERMS are consistent. 73 32.7 135 60.5 13 5.8 2 0.9 3.25 0.60

AverageMean 3.29

Availability of ERMS

ERMS has eased the management

and retrieval of information. 101 45.3 100 44.8 17 7.6 5 2.2 3.50 0.71

ERMS brings efficiency through time management.	76	34.1	125	56.1	18	8.1	4	1.8	3.28	0.67
The information I need to access is easily available.	111	49.8	93	41.7	15	6.7	4	1.8	3.43	0.70
ERMS grants access to data only to the desired users.	85	38.1	110	49.3	26	11.7	2	0.9	3.25	0.69
ERMS ensures the safety of stored records.	93	41.7	98	43.9	26	11.7	6	2.7	3.38	0.76
Average Mean										3.36
Grand Average Mean										3.38

Level of Awareness of ERMS by Administrative Staff

	SA		A		D		SD		Mean	SD
	N	%	N	%	N	%	N	% μ		
Perception of ERMS										
I sometimes find it difficult getting enough space for my records storage.	59	26.5	151	67.7	12	5.4	1	0.4	3.46	0.54
Some of the records I need to work with are sometimes very difficult to locate.	143	64.1	69	30.9	10	4.5	1	0.4	3.20	0.60
I sometimes lose track of information relevant for main-training safety in my work.	118	52.9	77	34.5	25	11.2	3	1.3	3.59	0.74
I sometimes lose track of my safety due to receiving too much										

information at the same time. 123 55.2 81 36.3 18 8.1 1 0.4 3.28 0.66

Safety is presented in such a

way that makes it difficult

to understand. 86 38.6 114 51.1 23 10.3 0 0.0 3.39 0.64

AverageMean 3.38

Comprehension of ERMS

I know how to act to

maintain safety. 123 55.2 84 37.7 16 7.2 0 0.0 3.48 0.63

It is hard to know which

consequences my actions have

for safety. 55 24.7 135 60.5 31 13.9 2 0.9 3.09 0.64

I know which information is

relevant for safety and which

information is not relevant. 154 69.1 59 26.5 8 3.6 2 0.9 3.64 0.60

I feel confident that I know how

to deal with various adverse

incidents that may arise. 57 25.5 150 67.3 16 7.2 0 0.0 3.18 0.54

I know which situations in my

work involve higher risks. 122 54.7 76 34.1 18 8.1 7 3.1 3.40 0.77

AverageMean 3.36

Projection of ERMS

I plan ahead in order to handle

various adverse incident that

may arise. 98 43.9 109 48.9 13 5.8 3 1.3 3.35 0.65

I notice when an unsafe situation

is about to arise in my work. 97 43.5 103 46.2 18 8.1 5 2.2 3.31 0.72

It is impossible to predict what

will happen during an incident. 119 53.4 79 35.4 20 9.0 5 2.2 3.40 0.75

I usually know what is going

to happen next with regards

to safety. 114 51.1 75 33.6 25 11.2 9 4.0 3.32 0.83

Average Mean 3.35

Grand Average Mean 3.36

Regression Analysis Result of Influence of Awareness on the Use of Electronic Records Management System among administrative staff.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.621 ^a	0.385	0.382	0.30156

a. Predictors: (Constant), Awareness

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	12.469	1	12.469	137.114	.000 ^b
Residual	19.915	219	.091		
Total	32.384	220			

a. Dependent Variable: ERMS

b. Predictors: (Constant), Awareness

Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
	Std. Error			

(Constant)	1.059	.199		5.327	.000
Awareness	.692	.059	.621	11.710	.000

a. Dependent Variable: ERMS

Regression Analysis Result of Influence of Awareness on the Security of Electronic Records Management System among administrative staff.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.684 ^a	0.468	0.466	.25783

a. Predictors: (Constant), Awareness

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	12.819	1	12.819	192.836	.000 ^b
Residual	14.558	219	.066		
Total	27.377	220			

a. Dependent Variable: Security

b. Predictors: (Constant), Awareness

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.024	.170		6.024	.000
Awareness	.701	.050	.684	13.887	.000

a. Dependent Variable: ERMS

b. Predictors: (Constant), Awareness

Bio-data

A. Personal Data

1. Full Name: SudetuOSENi
2. Address: 41 Egbeadokhai Street, P. O. Box 21, Auchi, Edo State
3. Date of Birth: 29th August, 1976
4. Place of Birth: Auchi, Edo State
5. Nationality: Nigerian
6. Next of Kin: Dr. Abubakar Idris Oseni, 41 Egbeadokhai Street, Auchi, Edo State.

B. Educational Background

1. Educational Institutions Attended with Dates

- Ambrose Alli University, Ekpoma 2012 – 2016
- Ambrose Alli University, Ekpoma 2008 – 2009
- AuchiPolytechnic, Auchi 2006 – 2007
- Success Computer Centre 2002
- AuchiPolytechnic, Auchi 1998 – 2000
- AuchiPolytechnic, Auchi 1995 – 1997
- Comprehensive High School, Auchi 1988 – 1994
- Otaru Primary School, Auchi 1980 - 1986

2. Academic Qualifications Obtained with Dates

- Masters in Education (M.Ed, Edu. Mgt) 2016
- Post Graduate Diploma in Education (PGDE) 2009
- Post Graduate Diploma in Technical Education (PGDTE) 2007
- Diploma in Computer Training 2002
- National Youth Service Corps (NYSC) 2002

- Higher National Diploma (Sec. Admin.) 2000
 - National Diploma (Sec. Admin.) 1997
 - West Africa School Certificate 1994
 - First School Leaving Certificate 1986
3. Professional Body Membership
- Professional Member, Association of Business Educators of Nigeria (ABEN) 2012
 - Professional Member, National Institute of Office Administrators and Information Managers (NIOAIM) 2022

C. Work Experience with Dates

1. Secretary, P. I. Imhodemhe & Co., Solicitors and Advocates, Auchi. 1998
2. Personal/Admin. Asst., Mac-Eed Ventures Ltd, Port Harcourt. 1998 - 1999
3. Secretary, United Parcel Services (UPS), Port Harcourt. 1999
4. Secretary (NYSC), Union Bank of Nigeria Plc, Auchi. 2002 - 2003
5. Part-time Lecturer, Auchi Polytechnic, Auchi. 2003 - 2005
6. Full-time Lecturer, Auchi Polytechnic, Auchi. 2005 – Date

D. Award and Fellowship

1. Fellowship Award, Institute of Policy Management Development, (IPMD) 2019

E. Membership of Academic Professional Bodies (Nil)

F. Publications (Journals)

- **Braimoh, M. Z. and Oseni, S. (2000)**
Coping with Information Technologies (IT) in the Teaching of Office Technology and Management Courses in Nigeria. Journal of Office Technology and Management, Auchi Polytechnic, Auchi. 2009

- **Jimoh, R. and Oseni, S. (2010)**
Causes and Effects of Unemployment on Graduates in Nigeria. Journal of Science and Humanity, Ambrose Alli University, Ekpoma.
- **Oboh, G. and Oseni, S. (2011)**
The Need for Automation – Electronic Office in Modern Day Organizations. Journal of School of Information and Communication Technology, Auchi Polytechnic, Auchi.
- **Oseni, S. and Oboh, G. (2013)**
Impact of Information and Communication Technology on the Performance of Office Managers. Journal of Information and Communication Technology, Auchi Polytechnic, Auchi. Vol. 1 No. 1
- **Oseni, S. and Oboh, G. (2013)**
Impact of Information and Communication Technology on National Development. Journal of Office Technology and Management. Auchi Polytechnic, Auchi Vol. 4 No. 1
- **Jimoh, R. and Oseni, S. (2013)**
Factors Influencing Academic Staff's Adoption and Integration of Information and Communication Technology (ICT) Into Teaching: A Review of Literature. Journal of Information and Communication Technology, Auchi Polytechnic, Auchi. Vol. 1 No. 2
- **Oseni, S. and Oboh, G. (2016)**
The Role of Information and Communication Technology (ICT) on Poverty Alleviation in Nigeria. Journal of Information and Communication Technology, Auchi Polytechnic, Auchi. Vol. 4 No. 1, Pp. 130 - 137
- **Oseni, S. and Oboh, G. (2017)**
Polytechnic Education in Nigeria – Issues and Trends. Journal of Information and Communication Technology, Auchi Polytechnic, Auchi. Vol. 4 No. 1
- **Oboh, G., Oseni, S. and Akugbe-Ogbeide, M. (2017)**
Factors Influencing Academic Staff's Adoption and Integration of Information and Communication Technology (ICT) into Teaching: A Review of Literature. Journal of Information and Communication Technology, Auchi Polytechnic, Auchi. Vol. 1 No. 2
- **Agbongiasede, E. E. and Oseni, S. (2017)**
Challenges Facing Public Tertiary Institutions in Nigeria and the Way Forward. Journal of Collaborative Research and Development, Ambrose Alli University, Ekpoma Vol. 5 No. 1
- **Oseni, S. and Ohikere, R. A. (2018)**
Perceived Effectiveness of Formal and Social Network Channels of Communication in the Management of Polytechnics in Edo and Delta

States. Education in a Digital Era and Future Workforce in Nigeria. Faculty of Education, Ambrose Alli University, Ekpoma. Pp. 227 – 240

- **Oseni, S., Oboh, G. and Ohikere, R. A. (2019)**
Challenges of Information and Communication Technology (ICT) in Managing the Secretarial Profession in Nigeria. Reinventing Nigeria Education for Global Competitiveness. Faculty of Education, Ambrose Alli University, Ekpoma. Pp. 133 – 146
- **Oseni, S., Oboh, G. and Ogedegbe, E. (2020)**
Secretarial Education in Tertiary Institutions in Nigeria: Way Forward Factors. Journal of Information and Communication Technology, Auchipolytechnic, Auchipolytechnic, Auchipolytechnic. Vol. 6 No. 1. Pp. 63 - 68
- **Oseni, S., Oboh, G. A. and Ohikere, R. A. (2021)**
The Changing Roles of the Secretary in the Era of Information and Communication Technology (ICT) – Problems and Prospects. Journal of Information and Communication Technology, Auchipolytechnic, Auchipolytechnic, Auchipolytechnic. Vol. 7 No. 1. Pp. 1 – 12
- **Oboh, G. A., Oseni, S. and Akugbe-Ogbeide, M. (2021)**
The Need for Entrepreneurship Education in Nigerian Tertiary Institutions. The Intuition: An International Journal. Vol. 9 No. 1. Pp. 399 - 410
- **Oseni, S., Ohikere, R. A. and Alli, A. Z. (2022)**
Information and Communication Technology (ICT) as a Tool for Records Management and Security Improvement in Business Organizations. International Journal of Office Administration and Information Management (IJOAIM). Vol. 2, Issue 1. Pp. 69 – 82
- **Oseni, S., Elamah, A. N. and Oriniowo, O. A. (2023)**
Classroom Management in Secondary Schools in Nigeria: Role of the Teacher. Wukari International Studies Journal. Vol. 7, No. 5. Pp. 62 – 70.
- **Oseni, S., Bakare, O. D. (Ph.D) and Alli, A. Z. (2023)**
Impact of Electronic Records Management System on the Security of Records among Administrative Staff. Wukari International Studies Journal. Vol. 7, No. 5. Pp. 99 – 110.
- **Bakare-Fatungase, O. D. (Ph.D) and Oseni, S. (2024)**
Entrepreneurial and Innovative Opportunities of Smart Working and Distance Learning. IGI Global. DOI: 10.4018/978-1-7998-8797-3. Pp. 24 – 47.
- **Bakare-Fatungase, O. D. (Ph.D) and Oseni, S. (2024)**
Use of Electronic Records Management System on Administrative Staff Performance in Public Polytechnics, Edo State, Nigeria. Lead City International Journal of Library, Information and Communication Sciences (LCIJLICS). Vol. 1, Issue 2

G. Major Conferences Attended with Dates

Nil

Signature

Date

Lead City University Ibadan DO NOT COPY

The University Compliance Certification

This is to certify that this thesis written by **Sudetu OSENI** with Matriculation No. **LCU/PG/002978** in the Department of Information Management of the Faculty of Communication and Information Sciences, Lead City University, Ibadan is in full compliance with the approved University format and style.

Signature

Date

Lead City University Ibadan DO NOT COPY