IMPACT OF ELECTRONIC RECORDS MANAGEMENT SYSTEM ON THE SECURITY OF RECORDS AMONG ADMINISTRATIVE STAFF

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KEYWORDS
Electronic Records Management System, Records Security, Records Management, Administrative Staff

ABSTRACT
Information and Communication Technology (ICT) has become an important tool in the day-to-day running of any office. For the past two decades, fast changes have been taking place in the office environment as a result of technological advancement. The role of the administrative staff in organizations has tremendously changed due to these changes in technology. In today's business organizations including tertiary institutions, administrative staff are exposed to office technology and are the chief organizers of the office most especially with regard to records management – from creation, utilization, storage, safety and final disposition of such records among others. These attributes put the administrative staff at the centre of playing a very important role in the efficient management of records as well as the office as a whole. The use of ICT has made the administrative staff to be part of today's dynamic office. However, the efficiency and effectiveness of performing their functions as records managers depend mainly on the availability of technological gadgets in managing such records as well as strategies put in place to secure such records. It is based on this premise that this study intends to systematically investigate the impact of electronic records management system on the security of records among administrative staff of the Public Polytechnics in Edo State, Nigeria. The study will adopt a positivist research paradigm and a quantitative research approach. The study will be underpinned by the Information Security Model to ascertain the confidentiality, integrity and availability of the records.

Introduction

Organizations need functioning records and archive management in order to succeed in the present-day business environment that is characterized with uncertainty, high risk, denial and increased crime rate. Records are the corporate memory of the organization that created them and they are used to supplement human memory. Records is documented evidence of our daily activities. It is a document, regardless of form or medium created, received, maintained and used by an organization (public or private) or an individual in pursuance of legal obligation, or in the transaction of business of which it forms a part or provides an evidence (Shepherd, 2016).

In this modern age, the continuous increase in the volume of information has transformed the manner in which organizations, both public and private carry out their businesses. Significant changes have taken place in the nature of the information being generated, stored, processed and distributed. Although technology can help to manage the creation and the processing of information, if used without understanding the records and information management principles, it will only invite haphazard effects (Ashantti, 2019). Records is seen as information created, received and maintained as evidence and as asset by an organization or person, in pursuit of legal obligations or in the transaction of business. While there are many purposes of and benefits to records management, it is to be highlighted here that a key feature of records is their ability to serve as evidence of an event. Proper records management can help preserve this feature of records (Popoola, 2020).

Records management has to do with everything involving how records are controlled right from when they are created down to when they are finally disposed of. It involves how records are created, received, maintained, used and finally disposed of. It is very important for the success of any business organization. When we say a record, we are simply referring to a document that involves business transaction which has to be documented. This may be letters, memoranda, reports etc., that exist both in the paper form and electronic form. 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 cloud (Lyman, 2014). Many companies have records that are confidential. Records management improves the security of those records. Many records management systems feature security protocols that protect these sensitive documents. This adds a measure of accountability for employees, ensuring that documents are handled as they should be. Records security covers the tools and processes that organizations use to protect records. This includes policy settings that prevent unauthorized people from accessing business or personal information. Ambira, Kemoni & Ngulube (2019) carried out a study and found that security of records ensures that records are protected from unauthorized activities, including inspection, modification, recording and any disruption or destruction. The consequences of security incidents include theft of private information, data tampering and data deletion. Security is one step in records management plan, but one of the most important. The creation and utilization of records in educational institutions including polytechnics in Edo State are some of the key factors that contribute to the strengthening of quality service delivery in such institutions. Reliable and timely information leads to effective management policies and planning. This improves the general records management of a country thus serving as a vital element for the overall growth and development of the institutions in managing and improving quality service delivery (Ahmed, 2020; Abdullah, 2017).

Good records management supports good data governance and data protection. Wider benefits include supporting information access, making sure that you can find information about past activities and enabling the more effective use of resources. Some studies carried out by Joshi & Singh (2017) shows that some of the consequences of poor records management include poor decisions, failure to handle information securely and inefficiencies. Security of records supports good data governance and is itself a legal data protection requirement. Poor record security leaves the systems and services at risk and may cause real harm and distress to individuals in particular and the institutions in general (Joshi & Singh, 2017).

The role of Information and Communication Technologies (ICTs) in improving the general management of information cannot be downplayed. This is affirmed by the ability of ICTs to capture, store, retrieve, analyze and transmit large volumes of information across various

locations. The adoption of ICTs in records management has not only been crowed generally as eminent in improving the reliability and effectiveness of records, but it has also been gloated for strengthening service delivery through its various tailor-made innovative applications and programmes such as the electronic records (Yusuf, 2014). Records management has gone through series of advancements for a long time now as a result of the adoption of ICT. This has improved the way tasks are performed in organizations (Alex, 2017).

Electronic Records Management (ERM) has become mandatory for government agencies in applying electronic records in administration to encourage E-government. Most organizations have huge allocation for ICT development. Mismanagement of records seems to be the main problem caused by poor records-keeping and lack of attention. Not all government departments possess electronic records management policy; some electronic records are far from complete, clear or easy to access. Many organizations are carrying out electronic records management without any policy in place (Umi & Zawiyah, 2019). There is a low support for records management that has led to a lack of training, tools and guidelines for all staff, as well as poor integration of records management and Information Technology (IT) disciplines (Rick, 2016).

Polytechnic records, whether in manual or automated form, houses the institutions' information that describes all aspects of students' management. It is an essential tool in running the day-to-day activities of the institutions. It is needed in carrying out business operations both within and outside the institutions. The introduction of Information Technology (IT) into businesses, educational institutions and government agencies has resulted in an information explosion and caused an increase in records volume of incredible proportions. Educational institutions are mostly affected by this growth as much of the information is channeled into businesses and government offices in the form of records for administrative effectiveness. Records managers and other category of staff in all the establishments, private or public institutions and government offices need records and archives for planning, decision making and control.

Security of Records

Security is the degree of protection against danger, loss, and criminals. It goes without saying that records should be protected both from damage and unauthorized access. The method of security depends entirely on the storage method that had been adopted. Where computers are used, confidentiality can be maintained by giving password to a document or file which makes it difficult for another user who does not know the password to gain access to the file. Most organizations now store their information in the computer thereby creating more space in the office. The level of security required for a record will vary, depending on the content of the record. Some records may have a very low level of sensitivity, requiring very little or no security. Others will have a high level of sensitivity, needing high security. The accessibility of a record should depend on its level of sensitivity. When you have decided how sensitive a record is, you will need to think about who needs to have, and who should have access to that record. Further, if data/information needs to be sent to a third party or other location, either within or outside the organization, then all necessary security precautions should be taken to protect it in transit. This will include sending in the most appropriate format, or packaging appropriately, and addressing correctly (Ashantti, 2019).

Authenticity of records applies to both hard copy and electronic records. There are some specific difficulties with maintaining the integrity of electronic records, for instance records kept on email, or data contained in a database, both of which can be changed easily. Measures to be taken should include: Controlling access to the record or data, knowing who has responsibility for and access to the record or data, preventing accidental or malicious change as far as possible, checking the accuracy of the information or data recorded, at regular intervals. Organizations should consider which format or medium to keep records in, and choose that which is most likely to be the most secure. In order to guard against loss they may need to back up their documents, particularly if they are vital or business critical in some way. Records should be stored safely and securely, both electronically and physically. Sensitive documents should not be left on the desk or computer screen when unattended. Organizations should consider the best method of disposal of the records, at the end of their lifetime.

Implementing the proper security measures to make sure that your critical records are not vulnerable to a breach should be one of the top priorities of any employee in charge of records management security. If one aspect of security measures breaks down, it will expose the company to the risk of a data breach, which could result in large fines, a damaged reputation, and may cause the business to go into liquidation. Security threats in records management come from all directions ranging from malware and data breaches to theft, fire or flood, making it essential to incorporate multiple types of security in records management. Records management requires appropriate protections for both paper and electronic information. There are three main parts to records management security - ensuring protection from physical damage, external data breaches, and internal theft or fraud (Fletcher, 2016).

Proper records management should entail security of the records. Security of records includes personal records of staff and students, records relating to teaching and research (particularly prior to publication), records of the institutions' activities etc. As a general rule, if the loss or unauthorized access or editing of the records could cause damage to the institutions or stop the administrative staff from doing their work, it will need greater security. Electronic records are particularly vulnerable to unauthorized or inadvertent change and loss. Administrative staff have a responsibility to consider security when handling records in the course of their work.

Security of Electronic Records Management System

Electronic records management is a subset of Information and Communication Technology (ICT), which entails sophisticated electronic approach of managing official records in organizations. Electronic records management system is the management of electronic and non-electronic records using computer hardware and software (Ngoepe, 2014). Electronic records management includes 'the creation, use, maintenance, protection and disposal of electronically created records for the purposes of providing evidence of business activities (Ambira, Kemoni & Ngulube, 2019). Organizations are fast moving toward electronic records management due to advancements in paperless office procedures. In order to prevent unauthorized access, alteration, theft, or physical damage to electronic records, electronic record protection practices are needed to place limitations on user access to computer systems and to have control over the physical storage of electronic records. Electronic records protection involves the use of computer application and tools to ensure security of digital records. An example of record protection application is Microsoft Access (MS Access). MS Access provides security features that prevent unauthorized users from trying to gain access to confidential database information and loss of data in case of a system crash. Examples of record protection practices include use of password on documents, token, smart card, biometric (fingerprint/face) encryption and so on. MS Access is among the record management applications being used mainly in offices, banks and companies where various categories of staff work (Lawrence, 2010).

Electronic records protection practices include firewalls, passwords, encryption, security copies and access rights for each user category and tools are used for securing electronic records confidentiality, integrity, accuracy and trustworthiness. Electronic records protection is the application of paperless management principles supported by specialized information technology systems used to safeguard business and personal information of an organization. Protection of electronic records require planning, budgeting, organizing and other managerial activities evolved in order to achieve adequate safety and security of official information. In the same view, an electronic records protection system is primarily a software-based methodology, used by an organization to manage all its records, regardless of format over the entire records life cycle (Ile & Ojohwhoh, 2020).

The importance of electronic records management practices in polytechnics demands administrative staff of such polytechnics to stay in touch with electronic records protection practices. Security of official information is becoming a serious threat in many polytechnics in Nigeria as a result of traditional paper filing system of record management practices adopted by administrative staff. Information has always been a valuable resource for all kinds of organizations, but now more than ever, in the current knowledge and innovation economy, academics and professionals accept that information and its good management are vital for the survival and development of businesses, as an essential asset for the proper

management of organizational knowledge (AIIM, 2018).

Electronic record management systems provide a well-established access control measures which only allows authorized access of records stored in the database. 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 organization (Oliverio, Pasewark & White, 2015).

Confidentiality, integrity and availability of ERMS are the measures adopted for Security of ERMS from the Information Security Model propounded by Thomas, B. in the 1970s. Security of records is the preservation of confidentiality i.e. protecting records from unauthorized access and disclosure; integrity which is safeguarding the authenticity, accuracy and completeness of records; and availability i.e. ensuring that the records and associated services are available to authorized users when required (Joshi & Singh, 2017). Appropriate protection is required for all forms of records, paper or electronic, to ensure business continuity and efficiency, and to avoid breaches of statutory, regulatory or contractual obligations. Public tertiary institutions especially polytechnics in Edo State and their records 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 these days. They are increasingly exposed and vulnerable to security threats.

Polytechnics producing hundreds of records each day means that after a given period of time, the records accumulate huge volumes of paper records. This may bring about difficulty in locating some records and safety of the records as well as poor integration of records management and Information Technology (IT) usage. This becomes the major challenge for paper records. This has also led to the challenge of retrieval of information within these institutions as it is always very difficult (at times impossible) to locate some records. All these anomalies may lead to the loss of image of such institution. Hence, the need to investigate the impact of ERMS on the security of records among administrative staff of Public Polytechnics in Edo State, Nigeria.

Summary of Gaps in Literature

Although there is literature on e-records management, many of those studies were conducted in fields other than tertiary institutions, including the mainstream civil service, businesses, and other organizations (Malanga & Kamanga, 2018). 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. The relationships between governance, audit, risk and record keeping are a central concern of the discipline of records management. Previous researches conducted were carried outside Africa and very few in Nigeria. Studies focusing on investigating the impact of security of ERMS seem to have receive less attention. Hence, the uniqueness of this work which aims at investigating the concept among administrative staff in Public Polytechnics in Edo State, Nigeria. This is the gap this study has identified to fill in the research.

Statement of the Problem

The awareness of Information and Communication Technology (ICT) and its associated facilities have grown rapidly in the management and service delivery of tertiary institutions over the last few decades. Paper-based records are fast giving way to electronic records in most developed countries and crawling gradually into the developing countries including Nigeria. The electronic records management system is designed to alleviate the limitations associated with the paper-based records management system and helps improve the quality of immediate retrieval of information within the sector. Unfortunately, the implementation of large-scale information technology projects such as electronic records management system seems to be associated with high failure rate. This challenge can be perceived to be even higher in developing countries including Nigeria. Preliminary investigation

showed that some public tertiary institutions in Nigeria still use the traditional record management system. In this traditional record management system, the greatest issue is the safety of the increasing number of tertiary institutions' records which has been the major challenge that many institutions keep battling with. Although, several studies have been carried out on implementation of ERMS across the globe (Pan, 2017; Ambira, Kemoni & Ngulube, 2019), however, study focusing on security of ERMS seems to have received less attention. For this reason, this study seeks to investigate the impact of security of electronic records management system among administrative staff of Public Polytechnics in Edo State.

Aim and Objectives

The aim of this study is to examine the impact of security of electronic records management system among administrative staff of Public Polytechnics in Edo State. However, the specific objectives are to:

1. Determine the level of confidentiality of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State.
2. Determine the level of integrity of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State.
3. Determine the level of availability of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State.

Research Questions

The following questions are raised to guide the study:

1. What is the level of confidentiality of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State?
2. What is the level of integrity of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State?
3. To what extent are the records of Electronic Records Management System available among administrative staff of Public Polytechnics in Edo State?

Methodology

The survey research design was adopted for this work. A descriptive survey design describes a condition or phenomenon as it exists naturally without manipulations. This method is appropriate because it is found useful in the collection of data on phenomena as employed by earlier scholars that share similar context with that of this study[1].

The population of this wok 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. This is represented on the table below:

Table 1: Population of Respondents

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

Source: field work, 2023

The stratified and simple random sampling techniques were used to select a sample size of 74 (seventy-four) administrative staff. This represented 30% of the population. The population and sample are represented in the Table 2 below:

Table 2: Population and sample size of Respondents

S/No	Public Polytechnics	Population	Sample
1	Auchi Polytechnic, Auchi	190	57
2	Edo State Polytechnic, Usen	55	17
Total		245	74

field work, 2023

The instrument for data collection was the structured questionnaire titled: Security of Electronic Records Management System Scale (SERMS Scale). The instrument is a structured questionnaire adapted from previous empirical studies. This study also adopted the Likert scale design which allows the respondents to provide their opinion about the issue under study. The instrument is made up of two sections. Section A contains the demographic information of respondents which is self-developed. The Bio-data of respondents will be measured through five (5) factors, namely gender, age, marital status, educational qualification and years of experience. Section B was designed to collect data on Security of Electronic Records Management System by administrative staff. The 12 items were adapted from existing literatures. The scale used a 4-point response format of SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree.

Face and content validity was used for this work with the input of some experts in the field of information management. The items for the instrument were gathered through related literature review and adaptation from questionnaires that have been used by other researchers. Corrections made were incorporated in constructing the final questionnaire.

The instrument was subjected to a reliability test to check internal consistency of all items measuring the variable in the study. The reliability of the instrument was done through a pilot study using 20 copies of the questionnaire which were administered to office managers in Kogi State Polytechnic, Lokoja. Data obtained were analyzed and compared to determine the reliability consistency of the items.

A primary data was collected to address the objectives of the study through a structured questionnaire in line with existing literatures. This instrument worked well with a descriptive survey research mainly because it supports the collection of data regarding opinion and perception of respondents at a point in time on current issues. The copies of questionnaire were administered by the researcher with the assistance of three research assistants. The research assistants were briefed on the purpose of the research and how to administer the instrument. Copies of the questionnaire were administered to the office managers of the two polytechnics and were retrieved same day. The whole exercise was done within two weeks. The data were analyzed using the descriptive statistics (simple percentage and mean).

Data Analysis

Data were collected by distributing the seventy four copies of the questionnaires to the respondents in their various institutions and the questionnaires were all retrieved. The analysis is done thus:

Table 3: Gender Analysis of Respondents

S/No.	Gender	Respondents	Percentage (%)
1.	Male	20	27
2.	Female	54	73
Total		74	100

Table 4: Age Analysis of Respondents

S/No.	Years Range	Respondents	Percentage (%)
1.	20 – 30	15	20
2.	31 - 40	26	35
3.	41 – 50	18	25
4.	Above 50	15	20
Total		74	100

Table 5: Marital Status Analysis of Respondent

S/No.	Marital Status	Respondents	Percentage (%)
1.	Single	28	38
2.	Married	46	62
Total		74	100

Table 6: Educational Qualification Analysis of Respondents

S/No.	Years Range	Respondents	Percentage (%)
1.	NCE/ND	09	12
2.	HND/B.Sc	46	62
3.	M.Sc/MBA	19	26
4.	Others	-	-
Total		74	100

Table 7: Working Experience Analysis of Respondents

S/No.	Years Range	Respondents	Percentage (%)
1.	0 – 10	14	19
2.	11 - 20	31	42
3.	21 – 30	17	23
4.	Above 30	12	16
Total		74	100

Table 8: Tabular Analysis of Responses to Research Question One

What is the level of confidentiality of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State?

Items	Statement	Variables	Responses	Percentage (%)
1.	Confidentiality of ERMS promotes best practices of managing records.	SA A D SD	41 25 6 2	55 34 8 3
Total			74	100
2.	Ensures security of the database management.	SA A D SD	40 34 - -	54 46
Total			74	100
3.	Ensures rights and privileges in access to specific database.	SA A D SD	40 23 5 6	54 31 7 8
Total			74	100
4.	Promotes authenticity and integrity of the system.	SA A D SD	53 21 - -	72 28
Total			74	100

Table 9: Tabular Analysis of Responses to Research Question Two

What is the level of integrity of Electronic Records Management System among administrative staff of Public Polytechnics in Edo State?

Items	Statement	Variables	Responses	Percentage (%)
1.	Data integrity in the ERMS positively affects the efficiency of our operations and the quality of our decisions.	SA A D SD	62 12 - -	84 16 - -
Total			74	100
2.	Integrity requires awareness of unclean data from the pre-implementation stage of the ERMS.	SA A D SD	23 29 13 9	31 39 18 12
Total			74	100
3.	I understand the concept and the value of integrated data available from the ERMS.	SA A D SD	34 23 12 5	46 31 16 7
Total			74	100
4.	Integrity requires control of unclean data from the pre-implementation stage of the ERMS.	SA A D SD	19 30 14 11	26 40 19 15
Total			74	100

Table 10: Tabular Analysis of Responses to Research Question Three

To what extent are the records of Electronic Records Management System available among administrative staff of Public Polytechnics in Edo State?

Items	Statement	Variables	Responses	Percentage (%)
1.	ERMS has eased the management and retrieval of information.	SA A D SD	36 38 - -	49 51 - -
Total			74	100
2.	ERMS brings efficiency through time management.	SA A D SD	25 45 4 -	34 61 5 -
Total			74	100
3.	The use of ERMS brings about quick retrieval of records.	SA A D SD	25 30 15 4	34 41 20 5
Total			74	100

4.	ERMS ensures records are only available to authorized users.	SA A D SD	11 14 28 21	15 19 38 28
Total			74	100

Results

This section deals with the results obtained from the analysis of data. 49 questionnaires were issued out to the various respondents in their schools and they were all retrieved representing a 100% retrieval rate.

The following results emerged from the demographic data:

- That females are more among the population study.
- That the respondents with the age ranges of 31 – 40 years are more among the population study.
- That there are more married respondents among the population study.
- That respondents with HND/B.Sc holders are more among the population study.
- That the respondents that have worked between the ranges of 11 – 20 years are more among the population study

The following are the results from the responses to the three research questions:

1. That administrative staff ensures that records stored with ERMS are of utmost confidentiality.
2. That the use of ERMS by administrative staff ensures that the integrity of information is enhanced.
3. That the use of ERMS ensures that information is easily and readily available and in the same format when required as well as enhancing their safety.

Discussion of Findings

Administrative staff of Public Polytechnics in Edo State ensures that records stored using ERMS are secured and are of utmost confidentiality as confidentiality promotes best practice for managing the records. This finding agrees with Ambira, Kemoni & Ngulube (2019) who asserted 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 disclosure.

The use of ERMS by administrative staff 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 as well as ensuring the completeness of such records.

The use of ERMS by administrative staff ensures the security of the records by ensuring that information is easily and readily available and in the same format when required as well as enhancing their safety. This is because available of records ensures that the records are available to authorized users when they are required. This finding agrees with Joshi & Singh (2017) who outlined some of the consequences of poor records management to include poor decisions as a result of failure to handle information securely and easy retrieval. The use of ERMS has eased the management and retrieval of information thereby bringing efficiency through time management. It has also brought about quick retrieval of records as well as ensuring that records are only available to authorized users.

Conclusion

Information management has gone through series of advancements for a long time now as a result of the adoption of ICT. This has improved

the way tasks are performed. The adoption of technology has changed the management of information in tertiary institutions as the institution in Edo State now use ICT in managing their information in order to cope with the increase in the volume of information they generate. Technology has helped to manage the creation and the processing of information in tertiary institutions in Edo State.

Offices of the tertiary institutions in Edo State are well equipped with ICT devices that facilitate productivity, accuracy and efficiency of work. The availability of these facilities in these institutions and the ability of office managers to use the facilities had a great impact on their performance. The result of such performance is quick retrieval of information as well as enhancing the security of such information. The use of ICT in managing information in tertiary institutions has transformed the office managers' office from paper more to paper less thereby enhancing economy of space as storage of information is being done in the computer system without making use of papers.

Recommendations

Based on the findings and conclusion of this work, the following recommendations were made:

i. Management of tertiary institutions in Edo State should be made to understand that the knowledge and application of digital methods in managing information is very vital for the security of such records as it ensures quick and easy retrieval as well as safety of information.

ii. Since the world of work is changing so rapidly, there is a constant need for retraining the office managers in the use of ICT gadgets for the security of records and total management of information.

iii. Management of the institutions should ensure that the office managers should constantly update their skills and knowledge of these new technologies in order to cope with the challenges associated with their use.

iv. Management of institutions should provide facilities for ICT security programmes to be fully incorporated and implemented in tertiary institutions so that office managers can be trained and equipped to face the challenges of records management in modern business offices.

v. Information and Communication Technology needs electricity to be effective. It is a known fact that power supply is not stable in Nigeria. The government should try to see that power supply is stable.

References

Abdullah, L. (2017). *Records & information management (RIM) – ARMA International.* www.arma.org

Ahmed, D. O. (2020). The principle of provenance and the concept of records creator and record: legal development. In the Principle of Provenance, Stockholm: Swedish National Archives. 33 - 49.

Alex, U. (2017). Electronic information media and records management methods: A survey of practices in United Nations Organizations. Information Society. 20(1), 25–44.

Ambira, C. M., Kemoni, H. M. and Ngulube, P. (2019). A framework for electronic records management in support of e-government in Kenya. Records Management Journal, 29(3), 305-319.

Ashantti, J. (2019). The record in the information age: A progress report on reflection and Research. Records & Retrieval Report, 12(1), 1–16.

Association of Information and Image Management (AIIM) (2018). *What is information management*? Available at: www.aiim.org/what

Fletcher, M. (2016). An introduction to information risk. The National Archives, 20, 16 - 23.

Ile, C. M. and Ojohwhoh, D. R. (2020). Extent of adoption of electronic records protection practices in Polytechnics in Edo and Delta States. ISJASSR. 2(4), 40-48. ISSN: 2507 -1528.

Joshi, C. and Singh, U. K. (2017). Information security risks management framework - A step towards mitigating security risks in university network. Journal of Information Security and Applications, 35, 128-137. doi:10.1016/j.jisa.2017.06.006. ISSN 22 14-2126.

Lawrence, U. C. (2010). Computer made easy, Nkpor: Sir Law Publishing Co.

Lyman, I. (2014). Managing records in the modern office: Taming the wild frontier. Archivaria, 39, 70-79.

Malanga, D. F. and Kamanga, B. C. G. (2018). 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

Ngoepe, M. (2014). The role of records management as a tool to identify risks in the public sector in South Africa. South African Journal of Information Management. 16(1), 1-8.

Oliverio, M. E, Pasewark, W. R. and White, B. R. (2015). *The Office, procedures and technology*. New York: South-Western Educational Publishing.

Pan, W. (2017). The implementation of electronic recordkeeping systems: An exploratory study of socio-technical issues. Records Management Journal, 27(1), 84-98.

Perrin, C. (2008). The CIA Triad.

Popoola, U. (2020). Organization and management of records in the public sector, 2nd ed. London: Longman.

Rick, A. G. (2016). Electronic information media and records management methods: A survey of practices in United Nations Organizations. Information Society. 19(2), 12–30.

Shepherd, E. (2016). Tradition and position in England, in N. Butikofer, H. Hofman and S. Ross (eds). Managing and Archiving Records in the Digital Era.

Umi, K. and Zawiyah, I. P. (2019). Managing records-related risks. [Online] Available from http://www.findarticles.com

Yusuf, A. (2014). The role of records management in promoting human rights, good governance and accountability. [Online] Available from: http://www.baobabconnections.org/article/