The Effect of Electronic Recordkeeping Implementation in Information Intensive Agency

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Abstract

An Electronic Records Management System (ERMS) is a computer-based program that sets up for the retrieval process of the records that stored in the system. This aim of the study was to investigate the effect of Electronic Recordkeeping implementation in Information Intensive Agency. The objectives were to determine whether there is a policy in electronic recordkeeping in this agency, to identify whether staff at this agency has skills or knowledge in electronic recordkeeping and to identify the challenges facing the implementation of electronic recordkeeping in this agency. A case study research method will be adopted to ensure greater reliability of data. Data will be collected from 40 staff using questionnaires and interview, in order to respond to the above objectives. Quantitative approaches will be used to analyze, present and interpret data and also supported by some interview from the expert.

Keywords: *Electronic Record, Records Management, Audit, Good Governance, Risk Management*

1. Introduction

When we discuss about recordkeeping systems, most organizations still do not understand and do not have an awareness that the importance of recordkeeping and also electronic recordkeeping. But, some organizations still using the traditional recordkeeping systems and some organizations do not have good recordkeeping systems. As we know, recordkeeping is one method of storage of records and also containing information required in the records. Therefore, it is very important that the organization has a systematic and orderly recordkeeping system in order to ensure that all records are maintained and can be retrieved when it is needed. If the organization fails in organizing the recordkeeping, it may affect everyday tasks and give negative impact to the organization.

2. Problems Statement

A statement of problem is a brief description of the problems that should be tended to by a problem solving team and ought to be displayed to them (or made by them) before they attempt to solve an issue. Then again, a problem statement is a claim of one or two sentences long that outlines the issue addressed by a study [1]. There are several issues raised regarding the effect of electronic recordkeeping in Information Intensive Agency:

• *No policy in electronic recordkeeping in this agency*
There is no fully accepted electronic records management policy at government departments in Malaysian. In developing the policy, the authors investigate and identify the sources referred and also the responsible party for the policy. Other than that, without encountering any trouble, the present policy couldn't suggest that

electronic records management can be practiced [2] due to lack of compliance with regulations of their poor records management [3].

• *Lack of skills or knowledge in electronic records management system*
The archivists at the national archives who have insufficiency of education and training that they received will contribute to their limited skills or knowledge in handling the electronic records [4]. This will put Malaysian archival heritage at risk because of the archivist that don't have a proper skills and knowledge of electronics record management.
Harries [5] stated that, knowledge processes dealing with records of actions where the knowledge processes include the meaningful context and content, information and working within and between the different professional communities where the researchers use the records and also create the records but according to Duranti [6], records managers' or archivists' responsibility are not to acquire the needs of knowledge. The articulation of future requirements is essentially in light of technical comprehension.

Challenges facing the implementation of electronic recordkeeping Asogw [7] have listed in his study, the e-government challenges in implementing electronic record keeping is lack of consultation, power outages incessant, security, privacy protection, barriers in technological, low Internet penetration, the 'digital divide' issues, skilled manpower shortage and corruption and bribery. Henriksen and Andersen [8] adds another challenges which is in reverse similarity that is when the software is updated to the new version, the organizations need to ensure that old records can be read and the public sector institutions regularly have an obligation to keep records for a long time. Duranti [6] on the other hand stated that the digital systems great-

est challenges are the maintenance and creation of reliable records and the overtime of their authenticity preservations and also the trustworthy of the records in every organization.

3. Research Objectives

The objective of the research is a clear, compact, declarative explanation, which provides guidance to examine the variables. Research objective is the outcomes looked for by the researcher toward the end of the research process. The objectives of a research project compress what is to be accomplished by the study. The research objectives of this study is attempts:

- To determine whether there is a policy in electronic recordkeeping in this agency.
- To identify whether staff in this agency has skills or knowledge in electronic recordkeeping.
- To identify the challenges facing the implementation of electronic recordkeeping in this agency.

Research Questions

A research question is the core fundamental of a research project, study, or review of literature. It focuses the study, determines the methodology, and guides all stages of inquiry, analysis, and reporting. A research question is a responsible investigation into a specific concern or issue. It is the underlying step in a research project. This research questions will help to address the problems or issues raised:

- Does this agency have a policy in electronic recordkeeping?
- Does staff in this agency have skills or knowledge in electronic recordkeeping?
- What are the challenges facing the implementation of electronic recordkeeping in this agency?

4. Literature Review

Fink [9] stated that a literature review created by researchers, scholars and practitioners for identifying, evaluating and synthesizing the current group of completed and recorded work where it is a systematic, explicit and reproducible strategy. On the other hand literature review also is not an annotated bibliography, which briefly summarizes every article that's been reviewed [10].

According to the National Archives of Scotland [11] explained that records management is the records that are precise control of an organization's, for the duration of their life cycle, with a specific end goal to meet operational business needs, statutory and financial necessities and community expectations. In guaranteeing the timely destruction of excess information and the protection and identification of vital and historically important records, the effective management of corporate information that permits fast, accurate and reliable access to records. Records management is a comprehensive regime in controlling records that made up of policies, procedures, systems, processes and behaviors.

The dependable evidence of actions and decisions that they guarantee is kept and remains accessible for reference and utilize when required and that the organization benefits from the records which is one of its key assets of effective management. Different levels of records management that be operated [12].

Electronic recordkeeping are technique for electronic equipment of any documents or records that are created, communicated and maintained, which is not only limited to Word and Excel documents, electronic mail, computer-based diaries, appointment books and calendars, electronic organizers and databases. In order to meet the business and accountability requirements of the University, the records must be created, captured and maintained in a way that guarantees their progressing of integrity and retrievability. The standards of managing electronic records and managing paper records are no different. As long as legislative, policy and archival requirements exist, the electronic records must stay accessible, available, usable and retrievable for as long as a business requires exists [13]. Deken [14] discuss about the overview of records and archival management before the electronic era have advent and also describe about how electronic environment have altered the way of the definitions and constructs of archives and records management. The different ways to deal with the challenges of electronic recordkeeping that are as of now being investigated and applied. The current approaches to electronic recordkeeping are creation, preservation, migration, conversion and encapsulation. In the electronic era, the way individuals and organizations create, disseminate and keep their records has changed unalterably.

Marutha & Ngulube [15] discuss about the implementation of electronic records management in the public health sector of Limpopo Province, South Africa. They want to know how electronic records were managed and the practice of current medical recordkeeping. The hospitals have not really utilize the information technology because there don't have advanced system for opening, tracking and indexing files that ensure the smooth running of the records management administration. They still use manual registers as their file tracking system.

For records management purposes, the electronic records system was not fully effective in the hospitals because the system used did not cover details of the patients but the system only captured personal and financial details. Authors suggest to move to fully electronic record creation and management because this system will help medical professionals to access the records in timely and effective ways.

Raas [16] stated that on how traditional records management software developer to create an electronic recordkeeping system is combining practices with electronic document management components. In this article author stated that TRIM is a management tool that designed to manage all records including scanned images, word documents, emails and physical files within an organization. It is to ensure that from a single interface there is a single database of accessible of information. The entire organization including finance, legal, human resources and investments is continuously being taken off. Johnston and Bowen [17] summarized three sets of benefits from implementing an electronic recordkeeping, which is for individual users, organization and society as a whole.

The *benefits for individual users* are availability of information when required, greater quality, efficiency and effectiveness at work, when looking for lost information, it's less blame and dissension and availability of evidence for what they were asked to do and what they did. The *benefits for organization* are less effort in completing a task that is required, more quickly work will be done, improves the quality of processes and their outcomes, improved the cash flow and laws and regulations is achieved and demonstrated for compliance. The *benefits for society* as a whole are processes organizational are open and can be understood and monitored, laws and regulations that organizations must comply, improved the quality of life and the record of historical is accessible and reliable.

The choice to implement an electronic recordkeeping can be driven by a scope of variables. These may incorporate the need to enhance productivity, administration, customer service and compliance with standards or legislation.

In any case, it's extremely essential for information professionals to recognize that such advantages wouldn't get from deploying the software alone, yet from a well-planned and implemented projects that successfully addresses the related change management and training issues for staff [18].

Records Management Policy

U.S. National Archives and Records Administration [12] stated that records management policy is a foundation of successful management of records in an organization. A policy that reflects an organization's needs starts with a good records management [19]. State of Florida Division of Library and Information Services

[20] informed that policies are important in agencies in order to retain their documentation are accessible as long as needed and ensure that electronic records are also retained and accessible when needed. Rusnah and Mohamad Noorman [4] identifies that IT personnel and officers from the policy making departments, they have knowledgeable enough in formulating the standard records management practices of electronic record policy.

Records management skills / knowledge

Kyobe, Molai and Salie [3] suggests there is a need for computer services to work in organization with different divisions that connect with or have special skills in records management. In order to contribute effectively to an electronic working environment, the records professional should be outfitted with the skills because records management will require more prominent discipline and more prominent creativity than previously [21]. Insufficient knowledge about the significance of records management for hierarchical effectiveness and responsibility and also records management plan are the challenges with regard in capturing and preservation of electronic records in the Eastern and Southern African countries [15.]

Ray and Haunton [22] presents the scope of the management skills utilized by records managers and archivists, and shows how they may be connected, adding value both in terms of personal professional development and in the organizational advantages of delivery service, excellence, responsibility and transparency in both large and small archive and records management units.

They skilled that they focus is on:
- identifying management skills for archivists and records managers
- corporate and strategic planning
- managing projects effectively
- managing money and other resources
- managing people
- providing responsibility: performance estimation
- advocating for archives and records management
- developing personal management skills.

Challenges

The challenges in managing electronic records in the National Archives of Malaysia are records created by legacy systems are still not addressed and also in preserving the nation's records produced by the legacy and the electronic government systems [4]. Aliza and Adnan [23] discuss that the challenges of long-term preservation of electronic records are genuine. The best impact for not considering the archival perspective of overseeing electronic records would be the loss of profitable information assets for an organization. The accessibility and the availability of those records in the long term depend particularly on the present actions taken.

Functional Requirement

According to International Council of Archives [24] describes that the functional requirement describes briefly and distinguishes in this area, where it utilizes a high-level model that bunches the requirements to highlight their interrelationships. This section briefly identifies and describes the functional requirements using a high-level model in Figure 1 where the model that groups the necessities to highlight their inter-relationships.

Functional requirements are gathered by thebunches in the high-level model:
- Create

According to ISO 16175[25] stated that functional requirements apply to records regardless of the media in which they were created or stored. Electronic records management systems particularly capture, classify and identify records to ensure that their content, structure and context of creation are settled in time and space.
- Maintain

In order to ensure the records accessibility continued, the records capture must be actively maintained in electronic records management systems. Records captured also must be prevent from unauthorized person from alteration of metadata.
- Disseminate

Searching is the process of identifying records or aggregations through user-defined parameters so that the records management metadata can be retrieved. Rendering is the procedure of a human-readable portrayal of a record, for the most part to a visual display screen or in printed version design.
- Administer

The system administrator needs to embrace system maintenance and other support functions such as maintenance of access groups and updating of the business classification system.
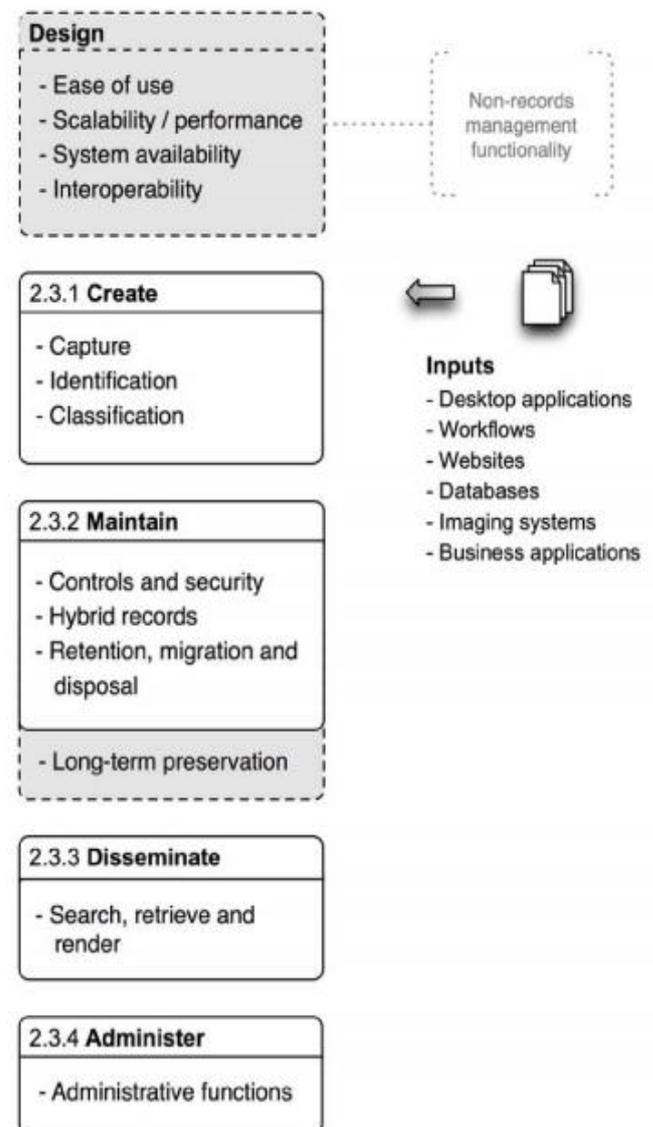

Figure 1:Model of high-level functional requirements for electronic records management systems

5. Methodology

According to Faculty of Humanities Study of The University of Manchester [26] stated that methodology implies more than just the methods you expect to use to collect data. It is frequently important to incorporate of the theories and ideas, which underlie the methods. The methods ought to be described in enough detail for the examination to be replicated or possibly rehashed correspondingly in another situation where every stage ought to be explained and defended with clear explanations behind the decision of your particular materials and methods. Methodology is the exact, theoretical investigation of the strategies connected to a field of study. It contains the theoretical analysis of the collection

of strategies and standards related with a branch of knowledge. The survey research method is used in this study to determine the effect of electronic recordkeeping in Information Intensive Agency. Questionnaires and interview were used as data collection instruments. The study targeted 40 employees and only six (6) staff that doing the recordkeeping. There are two sets of variable used for this purpose. For dependent variable are for the effect on electronic recordkeeping in Information Intensive Agency and for independent variable are focuses on records management skills/knowledge, records management policy and challenges on electronic recordkeeping.
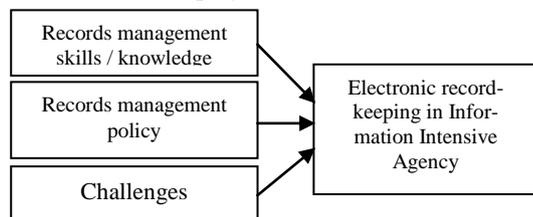
Figure 2: Conceptual Framework for the Effect on the Electronic Record-keeping in Information Intensive Agency.

Data Collection and Analysis

Data collection is the process of gathering and measuring data on focused variables in an established orderly design, which at that point empowers one to answer significant questions and evaluate results. From the research instrument, data will be collected by distributing the questionnaire to the staff and also do an interview session. These instruments were used in order to gather comprehensive data as well as to ensure the validity of the findings. Data analysis, also known as investigation of data or data examination, is a procedure of assessing, cleansing, changing and showing data with the objective of finding valuable information, suggesting conclusions and supporting decision-making. In this finding, tables, graphs and figures will be used. Descriptive data analysis will be used to summarize the data in the study sample or population. The data will be analyze using SPSS Version 24 and the analysis of the interview will be using Atlas.ti Vesion 8.

6. Conclusion

This proposal is the preliminary investigation to investigate the effect of electronic recordkeeping in Information Intensive Agency and as well as to improve the record management practices at the agency. The need for developing requirements of design electronic recordkeeping might be help during the implementation of the system.

Acknowledgement

References

[1]	Ellis, TJ. & Levy, Y. A framework of problem-based research: A guide for novice researchers. Informing Science: International Journal of an Emerging Transdiscipline. 2008;11: 17–33. ISSN 1547-9684.

[2]	Umi Asma' Mokhtar. & Zawiyah Mohammad Yusof. Electronic records management in the Malaysian public sector: the existence of policy. Record Management Journal. 2009;19(3):231-244.

[3]	Kyobe, M. E., Molai, P. & Salie, T. Investigating electronic records management and compliance with regulatory requirements in a South African university. South Africn Journal of Information Mangement. 2009;11(1):1-15.

[4]	Rusnah Johare. & Mohamad Noorman Masrek. Malaysian archival heritage at risk? Library Review. 2011;60(8):685-711.

[5]	Harries, S. Managing records, making knowledge and good governance. Records Management Journal. 2009;19(1):16-25.

[6]	Duranti, L. Concepts and principles for the management of electronic records, or records management theory is archival diplomatics. Records Management Journal. 2010;20(1):78-95.

[7]	Asogwa, B. E. Electronic government as a paradigm shift for efficient public services. Library Hi Tech. 2013;31(1):141-159.

[8]	Henriksen, H. Z., & Andersen, K. V. Electronic records management systems implementation in the Pakistani local government. Records Management Journal, 2008;18(1):40-52.

[9]	Fink, A. Conducting research literature reviews: from paper to the Internet: 4th ed. Los Angeles: SAGE Publications;2014.

[10]	Rallis, H. M.2006. Guidelines for writing a literature review. Retrieved December 12, 2016, from http://www.duluth.umn.edu/~hrallis/guides/researching/litreview.html

[11]	The National Archives of Scotland.2013. Electronic records management systems. Retrieved December 12, 2016 from http://www.nas.gov.uk/recordkeeping/erguidance/ERMSystems.asp

[12]	U.S. National Archives and Records Administration.2016. Electronic recordkeeping. Retrieved January 10, 2017, from https://www.archives.gov/records-mgmt/policy/prod2fnl.html

[13]	The University of New South Wales Australia.2016. Electronic recordkeeping. Retrieved December 12, 2016 from https://www.recordkeeping.unsw.edu.au/recordkeeping/electronicrecordkeeping.html

[14]	Deken, J. M. 2000. Electronic recordkeeping: An introduction. Retrieved December 12, 2016 from http://www.slac.stanford.edu/cgi-wrap/getdoc/slac-pub-8152.pdf

[15]	Marutha, N. S. & Ngulube, P. Electronic recrods management in the public health sector of the Limpopo province in South Africa. Journal of the South African Society of Archivists. 2012;45:39-67.

[16]	Raas, U. Electronic recordkeeping – more than electronic document management. Record Management Journal. 1999;9(2):117-129.

[17]	Johnston, G. P. & Bowen, D. V. The benefits of electronic records management systems: general review of published and some unpublished cases. Record Management Journal. 2005;15(3):131-140.

[18]	Queensland State Archives.2010. Guideline for the planning of an electronic document and records management systems (dDRMS). Retrieved April 12, 2017 from http://www.archives.qld.gov.au/Recordkeeping/GRKDownloads/Documents/eDRMS.pdf

[19]	Government Records Service.2011. Good records management practices. Retrieved December 12, 2016 from http://www.grs.gov.hk/ws/english/engimages/grmp_e.pdf

[20]	State of Florida.2010. Electronic records and records management practices. Retrieved December 12, 2016 from http://dos.myflorida.com/media/31109/electronicrecordsmanagementpractices.pdf

[21]	Thurston, A., Roper, M. & Millar, L. Managing electronic records. International Records Management Trust. Version 1, IRMT, London;1999.

[22]	Ray, Louise & Haunton, Melinda. Management Skills for Archivists and Records Managers. United Kingdom: Facet Publishing; 2017.

[23]	Aliza Ismail & Adnan Jamaludin. Towards establishing a framework for managing trusted records in the electronic environment. Records Management Journal. 2009;19(2):135-146.

[24]	International Council of Archives.2008. Module 2 Guidelines and funtional requirements for electronic records management systems. Retrieved April 12, 2017 from http://www.adri.gov.au/resources/documents/ICA-M2-ERMS.pdf

[25]	National Archives of Australia.2016. ISO 16175 Principles and functional requirements for records in electronic office environment. Retrieved April 12, 2017 from http://naa.gov.au/records-management/agency/digital/iso-16175/index.aspx

[26]	Manchester University.2010. Faculty of humanities skills website. Retrieved May 13, 2017 from http://www.humanities.manchester.ac.uk/studyskills/assessment_evaluation/dissertations/methodology.html