IMPLEMENTATION OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEM IN THE PUBLIC SECTOR: A CASE STUDY OF THE MINISTRY OF HIGHER EDUCATION SCIENCE AND TECHNOLOGY

COLLINS JUMA MUTIMBA

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE AWARD OF MASTER OF LIBRARY AND INFORMATION SCIENCE OF THE UNIVERSITY OF NAIROBI

2014

DECLARATION

I declare that this is my original work and has not been presented by anyone for academic purposes, hence all rights reserved thereupon.

Signature:_____ Date:_____

Collins Juma Mutimba
C54/60548/2013

This research project has been submitted with our approval as the University Supervisors

Signature:_____ Date:_____

Dr. Wakari Gikenye
Department of Library and Information Studies,

Signature:_____ Date:_____

Dr. Grace Irura
Department of Library and Information Studies,

DEDICATION

I dedicate this research project to my loving parents Mr. and Mrs. Barnabas Mutimba for their support both financially and in general life, my sisters and brothers, mother to my daughter Ashnil Keril Juma who has always been and will continue to be my reason for appreciating who I am and what I can do.

ACKNOWLEDGEMENT

Let me take this opportunity to thank all persons who in one way or the other contributed towards the success of this research project.

First of all, I wish to thank the almighty God for his sufficient grace and mercies for the gift of life and for having granted me good health in my whole life and throughout my study.

Secondly, I would like to thank my supervisors Dr. Gikenye and Dr. Grace Irura for their support, guidance, and encouragement throughout until the completion of my research project.

Thirdly, to all staff in The Ministry of Higher Education Science and Technology who accepted to provide data that was used in my research.

Lastly, I wish to take this opportunity to thank those people who directly or indirectly contributed to the success of this project.

May the almighty God bless them all abundantly.

TABLE OF CONTENTS

DECLARATION ii

DEDICATION iii

ACKNOWLEDGEMENT iv

TABLE OF CONTENTS v

ABSTRACT ix

LIST OF FIGURES xii

CHAPTER ONE 1

INTRODUCTION 1

1.1 Introduction 1

1.2 Background of the study 2

1.3 Statement of the problem 3

1.4 Aim of the study 4

1.4.1 Objectives of the study 4

1.5 Research questions 5

1.6 Assumptions of the study 5

1.7 Scope of the study 5

1.8 Limitations of the study 5

1.9 Significance of the study 5

1.10 Operational definition of terms 6

1.11 Summary 7

LITERATURE REVIEW 8

2.1 Introduction 8

2.2 Records management policy 8

2.3 Selecting an EDRMS 8

2.4 Benefits of implementing EDRMS 9

2.5 Success factors for EDRMS..... 10

2.6 Functionalities of EDRMS..... 12

2.7 Steps for implementing EDRMS..... 12

2.8 Implementing Records Management in System Development Lifecycle (Dirks Methodology) 15

2.9 Standards for the design of functional specifications for EDRMS..... 16

2.9.1 Model requirement for electronic records (Moreq2) 17

2.9.2 Department of Defense (DOD) 5015.2 Standard (STD)..... 17

2.10 Conceptual Framework..... 18

Figure 2.2 - Conceptual Framework 19

2.11 Summary..... 19

CHAPTER THREE..... 20

RESEARCH METHODOLOGY..... 20

3.1 Introduction..... 20

3.2 Research design..... 20

3.3 Area of study..... 21

3.4 Target population 21

3.5 Sampling..... 22

3.6 Data Collection Instruments..... 22

3.6.1 Questionnaires 23

3.6.2 Interviews 23

3.7 Ethical considerations..... 24

3.8 Data Analysis 24

3.9 Summary..... 25

CHAPTER FOUR 26

DATA PRESENTATION, ANALYSIS AND INTERPRETATION 26

4.1 Introduction 26

4.2 Respondent's response rate 26

4.3 Distribution of Respondents by Background Characteristics 27

4.4 Records Management Policy 28

4.5 Implementation and user needs assessment 31

4.5.1 Implementation of EDRMS 33

4.5.2 User training 34

4.5.3 Staff understanding on EDRMS 35

4.5.4 Importance of EDRMS 36

4.5.5 Staff Prefer using EDRMS 37

4.5.6 Users opinion on satisfaction with EDRMS 38

4.6 Opportunities of using EDRMS 39

4.6.1 User satisfaction on the system developers response rate 40

4.6.2 User (MoHEST staff) satisfaction survey 41

4.7 Challenges facing implementation of EDRMS 42

CHAPTER FIVE 45

SUMMARY OF RESEARCH FINDINGS, CONCLUSION AND RECOMMENDATIONS 45

5.1 Introduction 45

5.2 Summary of Research Findings 45

5.2.1 Records Management Policy 45

5.2.2 Implementation and user assessment 46

5.2.3 Opportunities of using EDRMS 47

5.2.4 Challenges facing implementation of EDRMS 48

5.2.4.1 Inadequate training..... 48

5.2.4.2 Inadequate documentation..... 49

5.2.4.3 Resistance to change 49

5.2.4.4 User needs analysis..... 50

5.2.4.5 Inadequate finances..... 50

5.3 Conclusion 51

5.4 Recommendations 52

5.4.1 Develop a records management policy 52

5.4.2 Training on electronic records management systems and change management..... 52

5.4.3 Provision of adequate documentation / system manual to the users..... 53

5.4.4 Invest on technical expertise to support system implementation 53

5.4.5 Provision of adequate finances 53

5.4.6 Adopt Dirks methodology framework to implement the EDRMS at MoHEST 54

5.4.7 Business continuity planning..... 54

5.4.8 Planning for long-term retention of digital records 54

5.5 Suggestion for further research 55

5.6 Summary..... 55

References 56

APPENDIX I 62

Introductory Letter 62

APPENDIX II - INTERVIEW SCHEDULE..... 69

ABSTRACT

This research aimed at investigating the implementation of Electronic Document and Records Management System at The Ministry of Education Science and Technology (MoHEST). The specific objectives were: To establish whether there is a policy set out for EDRMS in MoHEST; To find out whether user needs (MoHEST Staff) were met by the EDRMS; To find out the opportunities that exists by using EDRMS in MoHEST; To identify the challenges facing implementation of the EDRMS in MoHEST and lastly, to provide recommendations and a strategy to enhance proper implementation of EDRMS in the MoHEST. A case study research method was adopted to ensure greater reliability of data. Both qualitative and quantitative approaches were used to analyze, present and interpret data. To respond to the above objectives, data was collected using observation, questionnaires, documentary reviews, and interviews. The study focused at the Ministry of Higher Education Science and Technology in which 52 staff were selected to respond to research administered questionnaires. The finding were analyzed using Spss and Epi info data analysis tools and the research findings were presented in tables, and pie charts. Major findings of the study were that: MoHEST still uses the manual records management system despite the fact that an EDRMS was installed; MoHEST has a records management policy that is not known to everyone; there are inadequate documentation, inadequate finances and resistance to change by staff thus affecting the implementation of the EDRMS. Recommendations include: creating awareness of the records management policy to staff; investing on training staff on EDRMS and change management; adopting The Dirks Methodology framework to implement the EDRMS in MoHEST.

LIST OF ACRONYMS AND ABBREVIATIONS

DOD STD	Department of Defense Standards
EDMS	Electronic Document Management System
EDRMS	Electronic Document and Record Management System
HOD	Head of Department
HR	Human Resource
INC	Incorporation
ISO	International Organization of Standards
IT	Information Technology
MoHEST	Ministry of Higher Education Science and Technology
Moreq2	The European Model Requirements for the Management of Electronic Records
NARA	National Archives and Records Administration
No.	Number
PROV	Vendor Compliance Program
RM	Records Management
RMS	Records Management System
TIVET	Technical, Industrial, Vocational and Entrepreneurship Training
VERS	Victorian Electronic Records Strategy Standard

LIST OF TABLES

Table 3.1: Population of the study……22

Table 4.1: Respondents response rate……..…….26

Table 4.2: Distribution of respondents by background characteristics……...27

Table 4.3 User needs analysis……....32

Table 4.4 Implementation of EDRMS…….…..33

Table 4.5 User training on EDRMS……...34

Table 4.6 Users satisfaction on EDRMS……..…….38

LIST OF FIGURES

Figure 2.1 The Dirks Methodology……..……..16
Figure 2.2 Conceptual Framework……..……..…19
Figure 4.1 Existence of RM policy……..……..29
Figure 4.2 Implementation of records management policy……..…….30
Figure 4.3 Sensitization on Records Management Policy…….31
Figure 4.4 Sensitized areas on policy…….……...31
Figure 4.5: User needs analysis……..…….32
Figure 4.6: Implementation of EDRMS……. ……...…33
Figure 4.7 User training on EDRMS…….…35
Figure 4.8 Staff understand EDRMS……...……..…40
Figure 4.9 Staff understand the importance of EDRMS……....37
Figure 4.10 Staff prefer on using EDRMS by staff……...37
Figure 4.11 User satisfaction on EDRMS……..43
Figure 4.12 Level of operationalization of EDRMS…….40
Figure 4.13 User satisfaction on system developers response …….41
Figure 4.14 Staff satisfaction survey…….42
Figure 4.15 Challenges facing implementation of EDRMS …….43
Figure 4.16 Duration of addressing the challenges of EDRMS…….44
Figure 4.17 Recommendation on using EDRMS in other Ministries……44

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Most organizations in the public sector with an overarching electronic document and records management system in place handle with ease all their internally and externally generated information hence operate at a more superior level in terms of efficiency and effectiveness in service delivery as compared to those organisations that still heavily rely on manual files and folders (M-Files Inc., 2011). An electronic document and record management system (EDRMS) is defined as an automated, electronic document and records management system that enables organisations to manage unstructured information captured in paper and electronic formats, such as emails, word processed and spreadsheet contents (Pauline, 2008). It should also meet the ISO 15489 definition of a records system – an 'information system which captures manages and provides access to records through time' (Joseph, 2008:18).

Successful implementation of EDRMS is the backbone of every organization, because it enhances accuracy manifold and productivity. Effective implementation of EDRMS requires seamless alignment with business operations in order to improve output. Most countries in Africa are investing a lot of resources in terms of finances and manpower on EDRMS projects. Govan (2007) argues that implementations of EDRMS are at great risk of such an end as they change projects that involve unpredictable natures of people, and budget allocations that often weigh heavily on the side of technology instead of changing the habits of users.

Helle, et al (2008) observed that there has been limited implementation of EDRMS in governments, in spite of the benefits associated with EDRMS such as increased efficiency as well as effectiveness of services in the government, increase in transparency and accountability in making informed decisions and enhances efficient and cost effective services to the public. Furthermore, they opine that the key indicators of limited success of implementation of EDRMS project as inadequate

training and poorly designed user interfaces, and controls. The researcher investigates the implementation of electronic document and records management system at the Ministry of Higher Education Science and Technology.

1.2 Background of the study

In August 2010, the constitution of Kenya was promulgated leading to a number of reforms in the Kenya Public Sector. An integrity body was formed to monitor compliance with integrity in all government institutions, conduct investigations and make recommendations to the necessary authorities as per the sixth chapter of the Constitution. Chapter six of the constitution clearly stipulates that authorities assigned to a state officer is a public trust to be exercised in a manner that is consistent with the purpose and objectives of the constitution, demonstrate respect for the people, brings honors to the nation and dignity to the office and promote public confidence in the integrity of office (The Constitution of Kenya, 2010). Establishing proper records management systems in place shall enable the contents in chapter six works effectively and efficiently. Benfell (2002) asserts that Electronic Document and Records Management Systems (EDRMS) is the most effective enterprise wide solution. Helle Zinnar and Kim Viborg (2008:8) observed lack of adequate training, failure to do user analysis and design of user interface as the key indicators of the limited success of implementation of EDRMS.

The Ministry of Higher Education Science and Technology is ISO 9001:2008 ISO certified. The Ministry's Quality Policy Statement states that: - the Ministry is committed to quality higher education, science technology and innovation for prosperity and global competitiveness of Kenya. It was created through Presidential Circular No. 1 of May 2008 with the following mandate;- Formulation, promotion and implementation of higher education policies and strategies, research, science and technology: Formulation, promotion and coordination of national research, science, technology and innovation policy and strategies, and Technical, Industrial, Vocational and Entrepreneurship Training (TIVET): Formulation, promotion and implementation of TIVET policy and strategy. The global economy is undergoing rapid development, where technology, driven by skills and innovation, will be among the key determinants

of enhancing efficiency, productivity and competitiveness. Through Vision 2030, Kenya intends to become a knowledge-led economy wherein, the creation, adaptation and use of knowledge will be among the most critical factors for rapid economic growth. Realization of the Vision is predicated on harnessing the right creative talents capable of raising Kenya's international competitiveness by enhancing productivity at all levels. It envisages that throughout the education, training and research system, learning will inculcate the use of knowledge to create wealth, improve social welfare and promote democratic governance. In appreciation of the critical role of skills development for science, technology and innovation in today's shifting paradigm to knowledge-based economic development and the role that innovation has to play in knowledge-worker economies, the Government established the Ministry of Higher Education, Science and Technology to harmonize, implement, guide and coordinate higher education, science and technology towards the realization of their agenda which include;- Kenya Technical Teachers College, Institute of Technology and Technical Training Institute. Its vision is "The achievement of a national culture that prides in and actively promotes quality higher education, science, technology and innovation for prosperity and global competitiveness". Its mission is **"**The mission is to develop higher and technical education and enhance integration of science, technology and innovation into national production systems for sustainable development".

1.3 Statement of the problem

Records and Information management has in the recent past received increasing support and attention in the public sector across the globe as governments embrace information & communication technologies in the management of their corporate records. The public sector in most countries in Africa have embarked on reforms aimed at streamlining and bettering the life of their citizens, and creating new government machineries to establish efficient and effective management systems. However, despite the tremendous efforts and resources allocated to reforms, little progress has been made, and many African countries have not come close to their goal of developing and transforming their societies to the same standards as developed

countries. Effective implementation of electronic document management systems still remains a challenge for many countries mostly in the Public Sector.

There has been a lot of complains raised by the public in relation to the manual system used in MoHEST such as delay in service delivery, misfiling of records, lost files especially after employees have retired thus making it difficult for them to get their retirement benefits among other challenges. A sound records management system needs to be in place for the efficiency and effectiveness of services in the Public sector (World Bank, 2000). In 2010, the integrated records management system was installed and rolled out in the Kenya Government Ministries to manage records processes and functions. In spite of that, there still has been complains by the public on unavailability of records and delay in service delivery largely attributed by use of manual system irrespective of the integrated records management system being in place. Therefore, this problems presents a potential study to investigate the implementation of Electronic Document Management System in the Kenya's Ministry of Higher Education Science and Technology.

1.4 Aim of the study

The aim of the study was to investigate the success of the implementation of electronic document and records management system in the Ministry of Higher Education Science and Technology and suggest recommendations for improvement where necessary.

1.4.1 Objectives of the study

(i) To establish whether there is a policy framework for the implementation of EDRMS in MoHEST

(ii) To find out whether user needs (MoHEST Staff) were met by the EDRMS.

(iii) To find out the opportunities that exists by using EDRMS in MoHEST.

(iv) To identify the challenges facing implementation of EDRMS in MoHEST.

(v) To provide recommendations and a framework to enhance proper implementation of EDRMS in MoHEST.

1.5 Research questions

(i) Does MoHEST have a policy for EDRMS?

(ii) Were the user needs (MoHEST Staff) met by the EDRMS?

(iii) What are the opportunities of using EDRMS in the Ministry of Higher Education Science & Technology?

(iv) What are the challenges facing implementation of EDRMS in MoHEST?

(v) What recommendations would be required to enhance proper implementation of EDRMS in MoHEST?

1.6 Assumptions of the study

The study was based on the following assumptions:

- Although electronic records management is a critical aspect in reduction of costs incurred at MoHEST, the manual system is still in existence.
- All staff in MoHEST understand electronic document and records management system commonly referred to as "EDRMS".

1.7 Scope of the study

The scope of the study was the Ministry of Higher Education Science and Technology headquarters, Nairobi. The study area was limited to the MoHEST headquarters staff.

1.8 Limitations of the study

The study was limited by scarcity of literature because few studies have been done on electronic records and document management systems in Kenya.

1.9 Significance of the study

The study findings would assist MoHEST to strengthen EDRMS implementation strategies by emphasizing more specifically on management of electronic records as a vital component in scaling up efficiency and effectiveness in service delivery in Organizations.

The study would enlighten the EDRMS stakeholders on the need to effectively implement electronic records and document management projects.

The research contributes to the body of knowledge on implementing electronic records management system and informs the key steps on implementing EDRMS, development of records policy, as an integral part of effectively implementing an EDRMS project in the public sector.

1.10 Operational definition of terms

Electronic Document & Records Management Systems – This is a system that can manage the entire lifecycle of records, from creation through to disposal, and allows for the implementation of records management tools such as a business classification scheme and retention and disposal schedule.

Electronic Document Management System – It's a system designed to organize business files and records digitally, whether they started out in paper form or were generated by software applications

Electronic Record - A record generated or received by MoHEST in digital format that can be manipulated transmitted or processed by a computer.

Electronic System - It is the system used to manage records effectively in the ultimate goal of MoHEST.

Records - A record is 'information in any format created, received, and maintained as evidence and information by MoHEST in the transacting its business.

Records Management - is the planning, controlling, directing, organizing, training, promoting, and other managerial activities involved in records creation, maintenance and use, and disposition in order to achieve adequate and proper documentation of the policies and transactions of the MoHEST and effective and economical management of its operations.

1.11 Summary

This chapter has discussed the introduction and background information of the study, the background information of the Ministry of Higher Education Science and Technology, the statement of the problem, the objectives of the study, the research questions, the significance of the study, the scope and limitation of the study and finally, it has touched on the operational definition of terms used in the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review involves the systematic, location and analysis of documents containing information related to the research problem being investigated. It aims at providing detailed knowledge of the topic being studied. It helps the researcher uncover what has been done by other researchers related to the problem being studied. It helps a researcher avoid unnecessary and unintentional duplication; it also forms the framework within which the research findings are to be interpreted (Mugenda and Mugenda, 2003:14). On the other hand literature review shows the researcher the results of that are already related to the study being reported and also provides a framework for establishing the importance of the study as well as a benchmark for comparing results of the study with other findings (Cresswell, 2003:23).

This chapter covered reviews of literature that relate to implementation of EDRMS. The reviewed literature specifically cover functionalities of EDRMS, benefits of implementing EDRMS, key steps for successful implementing EDRMS, challenges of implementing EDRMS, successes and opportunities and successes of using EDRMS, objectives of implementing electronic and document management system, best practice and electronic records management standards.

2.2 Records management policy

Shepherd and Yeo (2003:22) opine that records management policy should be endorsed by senior management and be made readily available to staff at all levels of the organization. They further assert that it should sit alongside policy on other matters where best practice is critical to the achievement of the organization's goals.

2.3 Selecting an EDRMS

Immediately when the structure of the team together with the timetable for the project are established, fundamental requirements for the project , including the project size and cost, has to be fully established. The other fundamental aspects to consider when

selecting an EDRMS are vendor and software functionalities, training, standards, analysis of business processes and integration with other legacy systems. Minnesota States Archives (2012:8) identified the following process for selecting, implementing and managing EDRMS;- Conducting needs assessment by working with internal stakeholders and understanding your legal requirements to determine unique needs; vendor selection of the EDRMS; establishing an implementation plan for smooth working with internal stakeholders and vendors in developing a comprehensive implementation plan; and deployment which comprises installation and test of the system and user training.

2.4 Benefits of implementing EDRMS

Queensland Archives (2007:10) observed a number of benefits that can be realized through implementing and working with an electronic document and records management system. However, it's very vital for information professionals to recognize that such benefits wouldn't derive from deploying the software alone, but from a well-planned and implemented project that effectively addresses the associated change management and training issues for staff. It enhances quicker and convenient discovery and access to required information; Improves administrative efficiency and effectiveness, facilitates evidence-based and enhances making informed decisions, it helps in collaboration through avoidance of reinvention of the wheel' on developing documentation, secure and systematic management of unstructured data such as emails, documents and spreadsheets, efficiency gains with improved quality and consistency of organizational processes, enhancement of an agency's recordkeeping culture and promulgation of organizational standards for recordkeeping procedures and practices, improved information security, through greater control over and access to corporate information, reduced risk of loss of records, reduced legal liability exposure, ability to integrate core business applications with the EDRMS enabling improved records capture through automation, facilitation of compliance with legislative obligations and standards, improved accountability and transparency of government administration, improved customer service, evidence of the authenticity, and integrity and reliability of electronic public records.

Miller (2012:188) asserts that EDRMS systems are absolutely essential in order to achieve recordkeeping compliance, but initially are extremely disruptive to users. Moreover, he argues that EDRMS have a different place to store documents, it takes more time and effort to store documents, things are organized differently, there are new rules to follow and documents are even deleted! Thus making most users resist this disruptive change. And therein lies the principle challenge to successful implementation on user adoption. Furthermore, Miller states that EDRMS can be implemented successfully, as long as sufficient resources (people, the organization, and the governance principles) are applied to the non-technology side of the implementation project. For the EDRMS to be successfully implemented, the first level of change is the people (attitudes, roles), and policies (decisions, rules of conduct). Then business procedures can be altered to accommodate the changed rules and policies. And finally, the technology can be fitted to the new business procedures, which in turn reflect the underlying policies and rules.

2.5 Success factors for EDRMS

Luica and Ibiricu (2008:3) argue that, to implement successfully an EDRMS, it is important to deduce backing of management throughout because is essential to firmly establish information policy and enrollment of user support for the system of an institution. In addition, they say, effective and timely communication of system functionality and key concepts must ensue, thereby raising awareness of potential long-term benefits and giving rise to document and records management procedures that bridge the gap between technological functionality and user practices in order to instigate a consistently high records management standard. Moreover, they assert that this approach is also necessary for key users to be able to operate efficiently in their business areas and support records managers, thus the importance of committed key users. Furthermore, they indicate that, productive training is crucial to form responsible system users who appreciate modern technology as a straightforward means of meeting business needs and safeguarding corporate memory.

The limited literature on EDRMS case studies indicates that top management support, good recordkeeping awareness and practice, early development of Business Classification Schemes (File Plan/Thesaurus), adequate and on-going training and support; and well-prepared change management strategies are the keys to success in developing enterprise wide electronic records management solutions. Managerial support and commitment is vital for the successful completion of an EDRMS project (Ellis 2005:3; Fuzeau 2005:3). The involvement of senior management will ensure funding for the project and enhance employee awareness of the importance of EDRMS adoption. A good records management culture needs to be in place before the implementation commences. Staff should be made aware of the importance of recordkeeping and their recordkeeping practice should be enhanced to accommodate the changes brought about by the new technology (Maguire 2005:157).

Technology alone does not improve an organization's recordkeeping culture – this comes from the employees' awareness, attitudes and practice. The development of a Business Classification Scheme (also known as a File Plan or Thesaurus) before EDRMS implementation is crucial (Northern Ireland Civil Service 2006:3; Williams 2005:3) to ensure staff understand the association between records and to assist them in gaining familiarity with record locations. EDRMS is associated with 'change' (Jeffrey-Cook, 2005:3): change in terms of organizational recordkeeping culture, as well as in terms of individual working habits and responsibilities. Getting the system into place is (comparatively) easy, but ensuring that employees use it effectively is very difficult. As with any other enterprise wide Information Systems implementation, user resistance is the major hurdle for EDRMS uptake (Miller, 2005:187).

Traditionally, records management is often considered to be the boring responsibility of administrative or records staff but with the implementation of an EDRMS, records management suddenly becomes the responsibility of every employee in the organization. An all-encompassing communication strategy which involves staff from the very first stage of the project to the very end of the implementation is the core of a successful EDRMS change management plan (Wilkins et al., 2007:3). Adequate and

on-going training and support ensures staff awareness and maintains ongoing staff commitment to the system (Maguire, 2005:150) – the ultimate goal of such a project. According to an IS manager responsible for an EDRMS project, EDRMS projects cannot be considered complete for at least 5 years after the initial implementation (Wilkins et al., 2007:37).

2.6 Functionalities of EDRMS

Joseph (2008:8) observed that EDRMS products offered by vendors such as Hewlett Packard (TRIM), Open Text Corporation (Live Link and e-Docs), Objective Corporation (Objective), ECM documentum) and IBM's (File Net) have common functionalities such as;- document capture and registration; viewing by enabling the viewing of corporate documents and records in their native applications; check-in and check-out which controls the editing of documents stored in the system; auditing; version control; workflow module; scanning module and lastly, the ability to declare a record allowing the transition status when the document become a record.

2.7 Steps for implementing EDRMS

Downing (2007:7) identified the following key steps for implementing an EDRMS;-

a) Make the Process Transparent

In most organizations, an EDRMS may require users to choose a folder in a file plan, pick from a favorites list, or choose a document type – each of which has a retention period associated with it when the document is first saved.

b) Manage User Expectations

One of the most important aspects of implementing a new system is managing user expectations. Psychologically, it is always better to undersell a system and to over-deliver the product than it is to oversell a system and under-deliver the product. If users are told the system is the next best thing to sliced bread, they are going to set their expectations high and likely be disappointed if the system doesn't deliver as promised.

c) Focus on People

The easiest way to get people to adopt EDRMS is to show them the benefits of using it both on a personal level, which is the first thing they will want to know, and on an organizational level.

d) Focus on Processes

When implementing EDRMS, there are two approaches to handling process changes. The first is to customize the software to handle existing business processes, and the second is to change the process to accommodate the technology. Customizing software takes time and costs money, not only during the initial design stage but every time an upgrade is done, especially when integrating with other systems.

e) Train on Processes

Focusing on training users to use the technology is a great beginning, but training needs to go beyond the software. Users need to know how to save and search for documents, but just as much time, if not more, should be spent training users on how they will use the software. To feel comfortable with a new system, users have to know at an individual level how technology will affect their daily processes and their given role in the organization

f) Keep Sight of the Big Picture

Be careful not to give departments or business units everything they ask for in isolation. The project manager has to weigh the requests of one department with the overall standards of the organization. Giving each department exactly what they want can lead to islands of information that create fragmented systems or multiple applications that don't talk to each other.

g) Understand Changing Communication Dynamics

Communication systems change as work is created electronically. Electronic notification increases as work flows from one person to another in production processes. E-mail is a large contributor to this, but other databases can be used to communicate progress, especially communication tools such as those used by workflow (or business process management) applications. Business process

management applications rely heavily on routing/managing electronic documents and add automated rules to how work flows between roles during a specific process.

On the other hand Govan (2007:18) argues that implementing an EDRMS requires a project management framework encompassing the following steps:

a) identify your business requirements
b) obtain support of senior management
c) scan the market
d) implement your framework
e) select
f) procure
g) design
h) implement pilot (rollout and training)
i) review
j) full implementation (rollout and training)
k) external audit

Moreover, The Common wealth of Australia (2011:22) outlined the following as the key consideration when implementing an EDRMS;- full support from senior management is essential to the success of an EDRMS implementation; As with other systems, an EDRMS requires an ongoing commitment of time, money and personnel for implementation, operation and maintenance; An EDRMS implementation is a major change management exercise – it is going affect the agency's culture in the way all staff manage, access, and use information; On its own, an EDRMS will not solve all your information management issues. It further emphasizes that to ensure a better outcome, organizations need to invest in fixing other records and information management challenges that includes an active training program and lastly, end users take greater responsibility for managing records and information once an EDRMS is up and running – it is important that they are involved throughout the project.

2.8 Implementing Records Management in System Development Lifecycle (Dirks Methodology)

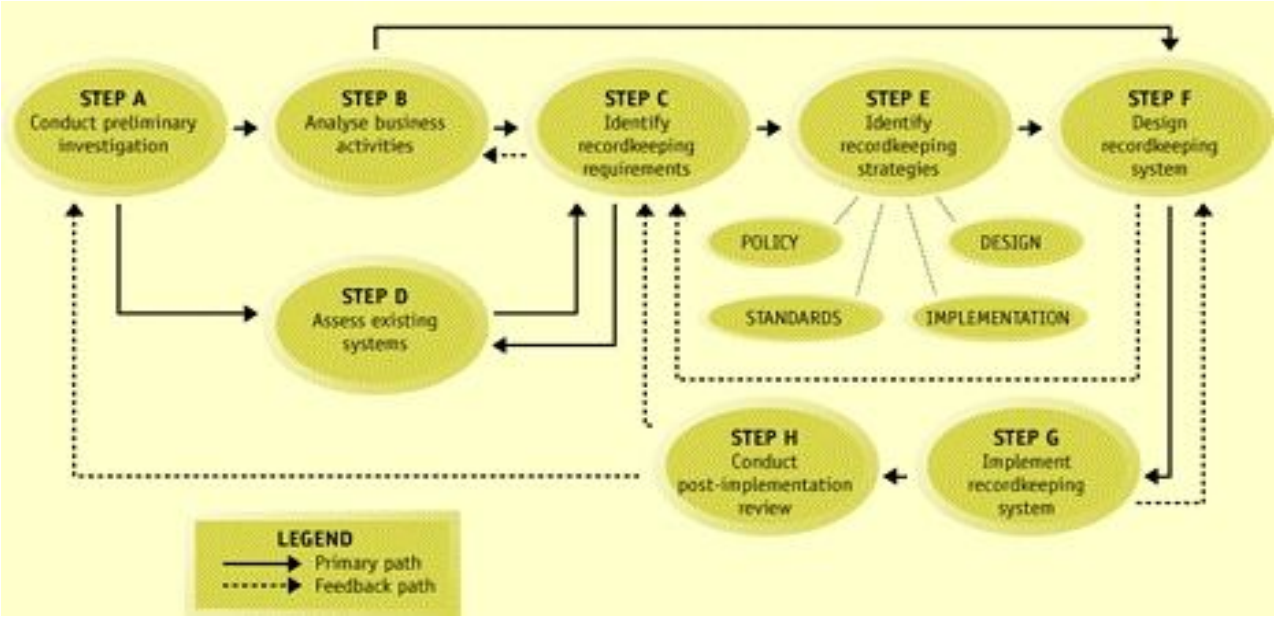

Figure 2.1 - The Dirks Methodology, Source: ISO 15489

The DIRKS methodology provides the foundation for good recordkeeping. The DIRKS methodology is an 8-step process designed to assist organizations to improve their management of records and information. It is based on and expands the best-practice approach outlined in Australian Standard AS 4390-1996, Records Management and International Standard ISO 15489, Records Management and the accompanying technical report. The methodology is a structured and rigorous approach designed to ensure that records and information management is firmly based in the business needs of the organization.

The methodology consists of the following eight steps: preliminary investigation (Step A); analysis of business activity (Step B); identification of recordkeeping requirements (Step C); assessment of existing systems (Step D); identification of strategies for recordkeeping (Step E); design of a recordkeeping system (Step F); implementation of a recordkeeping system (Step G); and Post-implementation review (Step H).

Steps A to C ensure that the systems development process is focused on 'the right things' while the remaining Steps D to H focus on making sure that things are 'done right'. Organizations will find the methodology particularly useful for identifying the gap between their existing practices and contemporary best practice, regardless of whether they operate in an electronic, paper-based or hybrid business environment.

Due to its rigour, the methodology requires every organization to make a significant commitment in terms of staff, time and money. However, this investment paid ongoing dividends to the organization, government and wider community through improved efficiency and greater accountability.

The manual is primarily aimed at project teams established to develop or review records and information management practices within organizations. These teams may include organizational staff as well as external consultants. Depending on the nature of the project, these teams included the following: a senior project manager; recordkeeping professionals, including archivists and records managers; information managers; information technology (IT) and telecommunications professionals, including systems analysts, application developers, data managers and network administrators; corporate governance specialists, including Freedom of Information (FOI) officers, privacy and data protection administrators, auditors, legal professionals and quality assurance personnel; business area experts; and Staff representatives.

2.9 Standards for the design of functional specifications for EDRMS

According to Pauline and Joseph (2008:7) selecting the right EDRMS solution for an organization is a daunting task and requires both an understanding of the organization's information and business requirements, and matching these with the EDRMS functionalities provided by the vendors. Records Management professionals who consider or embark upon implementing EDRMS should consider the following standards as a good source for developing business cases, and evaluating and selecting EDRMS solutions.

2.9.1 Model requirement for electronic records (Moreq2)

The European Model Requirements for the Management of Electronic Records (MoReq2), published in 2008, builds on the original publication of MoReq in 2001. The MoReq2 functional specifications simply list what an electronic records management system (ERMS) must do. The revised edition was scoped to include 'information from ISO 15489; work performed in the archive field by various countries in the European Union; and to ensure compatibility with key standards for metadata and other records management related issue'. Fanning (2007:14) reported that other reasons for the revision are user-specific, such as improvements to simplify the user interface of EDRMS by reducing metadata users' need to input, and to simplify the classification system. Although MoReq2 markets itself as a standard for the functional specifications of electronic records and not documents, it does include thirty-three specifications for document management and collaborative working under the optional modules section. Hence, MoReq2 does provide guidelines on the functional specifications of all the major components of an ERMS as well as EDRMS to manage electronic and paper documents and records throughout their information lifecycle. It consists of 794 specifications for the design of an EDRMS that manages both paper and electronic documents and records, and also specifies 197 metadata elements for an EDRMS. It has chapters devoted to providing specifications for classification schemes, retention and disposition schedules, capturing records, searching and retrieving information, security, and rendering and administrative controls.

2.9.2 Department of Defense (DOD) 5015.2 Standard (STD)

The Department of Defense (DoD) 5015.2 standard (STD)performs the same function for the United States (US) as MoReq2 does for Europe. Unlike MoReq2 the DoD 5015.2-STD is focused only upon specifications for electronic records, and thus for Electronic Records Management Systems (ERMS) and not for EDRMS, as the management of documents are omitted from this standard. The United States Department of Defense's standard DoD 5015.02-STD sets the mandatory baseline functional requirements and identifies non-mandatory features deemed desirable for

ERMS used by US Department of Defense organizations, as well as for the transfer of records to the US National Archives and Records Administration (NARA). DoD 5015.02-STD is based on and endorsed by NARA's regulations in the US, and is used extensively in the US as the benchmark for ERMS.

2.10 Conceptual Framework

According to Smyth (2004:33), conceptual framework is structured from a set of broad ideas and theories that help a researcher to properly identify the problem they are looking at, frame their questions and find suitable literature. Most academic research uses a conceptual framework at the outset because it helps the researcher to clarify his research question and aims. According to this study independent variables are policy and legal framework, user needs and records management infrastructure. Policy and legal framework is crucial as it help in determining who needs to access what and the rights and privileges on using the EDRMS. It's also important in ensuring that legal issues are adhered to for instance when developing retention and disposition schedule for the records and information captured in the system.

User needs is another important aspect in enhancing the implementation of EDRMS. User needs analysis has to be undertaken in order to establish the readiness of the users towards using the new system. If user needs analysis isn't done appropriately, then the failure of implementing a system is likely to increase in an organization. Records Management infrastructure are things that should be there to support the use of the system. For instance, the necessary equipment or facility for supporting records management operations, record management experts among others.

Intervening variables are those which are likely to affect the implementation of EDRMS in MoHEST. They include lack of management support, training and awareness and organization culture. Appropriate training and awareness has to be undertaking before installing the system and at the end (User training and acceptance). This is crucial as it prepares the users psychologically thus curbing resistance to change among them. Lastly, there is the outcome of implementing EDRMS which is basically to enhance efficiency and effectiveness in records management. This

includes; - saving on office storage space, quick sharing and dissemination of information amongst the users, reliable back up of information, enhances quick decision making process since information can be retrieved faster regardless of the geographical location of the user.

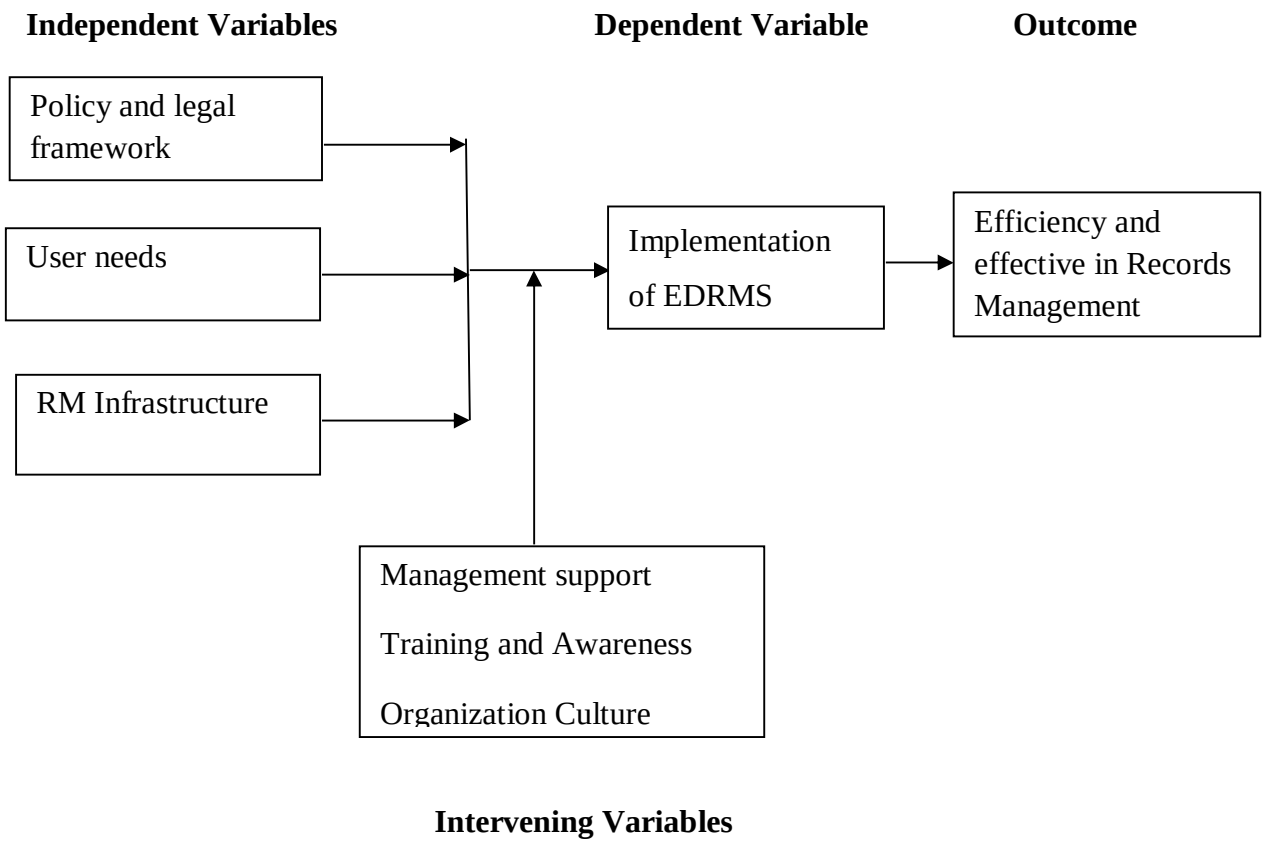

Figure 2.2 - Conceptual Framework

2.11 Summary

This chapter has discussed Introduction, theoretical framework, theories in Records Management functionalities of EDRMS, benefits of implementing EDRMS, key steps for successful implementation of EDRMS, Implementing Records Management in System Development Lifecycle (Dirks Methodology) EDRMS success factors, selecting an EDRMS, standards for the design of functional specifications for EDRMS and conceptual framework.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology to be adopted for this study. It presents the study population, sampling, data collection instruments, data collection procedures and data analysis.

3.2 Research design

Different scholars have come up with several approaches in defining methodology for instance it has been defined as processes which refers to procedures and techniques used to collect, store, analyze and present information (Churchill, 1995:31). Moreover, it is seen as the study of methods used in conducting a research within the social and natural sciences (Watson & Hill, 1993:44). Kothari (2004:13) states that, research methodology, does not only refer to the methods that are used in collecting research data but also "considers the logic behind the methods we use in the context of the study and an explanation of why a particular method is being used" in order to draw a sample for data collection and not another method.

In qualitative research, the researcher gains insight into the underlying issues surrounding a research problem by gathering non-statistical feedback and opinions rooted in people's feelings, attitudes, motivations, values and perceptions repeatedly from small samples (Bless and Higson, 1995:56). Similarly, Kothari argues that in qualitative approach, the researcher assesses the attitude of the subject, behavior and opinions. He further denotes that the results generated from this approach are either not subjective to rigorous quantitative skills or in a non-quantitative format (Kothari, 2004:37). Moreover, qualitative approach focuses on understanding of social phenomena from perspective of the human participants in the study (Ary, Jacob and Razarich, 2002:16).

On the other hand quantitative research uses objective measurement and statistical analysis of numeric data to understand and explain phenomenon (Ary, Jacob and

Razarich, 2002:19). Quantitative approach is also argued that it involves a scientific, concrete and projectable numeral data that can be statistically analyzed. It normally gathered from a large sample (BJA, 2005:43). Quantitative approach is further classified into inferential, simulation and experimental approach. In simulation, data and information is generated based on the artificial environment (Kothari, 2004:35). In this study, both qualitative and quantitative research approaches were used.

Research design is the arrangement of conditions for collection and analysis of data in a way that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004). Moreover, it has been defined as a framework or plan for a study use as a guide in collecting and analyzing data (Bless and Hingson, 2004:67). Research design is purposely meant to ensure that the study is relevant to the problem and economical procedures (Churchil, 1995:42). The choice of the research design depends on the research approach. The research design adopted is a case study where the Ministry of Higher Education Science & Technology is selected as a case where the system has been installed and configured. MoHEST was chosen as a case study because of the vast amounts of records created every year as students get their results nationwide and also by the fact that it is ISO 9001:2008 ISO certified and its committed to quality higher education, science technology and innovation for prosperity and global competitiveness of Kenya. This resonated to selecting it as case study in order to establish whether the EDRMS has really been implemented in the Ministry.

3.3 Area of study

This study was based in the Ministry of Higher Education Science and Technology at Jogoo house, Nairobi.

3.4 Target population

Busha (1980:20) defines population as any set of persons or objects that possess at least one common characteristic. The study population focused on the records managers, clerical officers, IT staff and heads of department in MoHEST. The population of this study comprised of 52 employees in MoHEST. The entire

population was used in this study. Leedy (1997:277) argues out that there is little point in sampling populations that are less than one hundred (100).

3.5 Sampling

Trochim (2005:10) states that "sampling is the process of selecting units (e.g. people, organizations) from a population of interest so that by studying the sample, we may fairly generalize our results back to the population from which the sample was chosen". Therefore, a research sample is a specific unit/section of the population that we take to study basically because it is practically difficult to study the entire population. A research sample is expected to mirror the population from which it comes. However, there was no guarantee that any sample was precisely representative of the population from which it comes (Mugo, 1995; Mendy, 2007). The entire population was used in this study. Leedy (1997:277) argues out that there is little point in sampling populations that are less than one hundred (100).

Table 3.1: Population of the study (52)

Category	**Population**	**Percentage**
Records Managers	3	100
IT Staff	10	100
Department Heads	9	100
Clerical Officers	30	100
TOTAL	**52**	**100**

3.6 Data Collection Instruments

According to Haddow & Freeman (2008) data collection is used to describe a process of preparing and collecting data. Kothari (2004) denotes the following data collection tools used in research; questionnaires, interviews, and document review. The following instruments were used to collect data for this study: questionnaire,

interviews schedules and documentary sources. These instruments were used in order to gather comprehensive data as well as to ensure the validity of the findings.

3.6.1 Questionnaires

They are data collection methods commonly used to obtain important information about the population. It is designed and developed to address a specific objectives, research questions or hypothesis of the study. The researcher therefore needs to take the above into consideration when designing a questionnaire and must also know how information obtained was analyzed (Hawryszkiewycz, 2001; Day, Sammons & Gu, 2008; Mugenda and Mugenda, 1999). Structured and closed-ended questions were designed and distributed to the respondents. The total number of respondents selected to fill the questionnaires for this study were 43 (forty three). They were selected because they interact with the system always in their day to day activities. However only 40 (forty) filled and returned the questionnaires. Benefits of using structured questionnaire is that the researcher gets easier time to analyze data since they are in an immediate usable form, it is easier to administer because each item is followed by alternative answers, lastly, it is economical to use in terms of time and money. A sample is included in the **Appendix 1**.

3.6.2 Interviews

An interview is an oral administration of a questionnaire or an interview schedule. A researcher needs to obtain maximum co-operation from respondents in order to obtain accurate information through interviews. The researcher must therefore establish a friendly relationship with the respondent prior to conducting the interview (Mugenda and Mugenda, 1999:14; Manderson, 2007:19; Raudenbush, 2005:36). They further identified the following benefits of interviews to a researcher;-It provides in-depth data to the researcher which is not possible to get using a questionnaire, Interviews make it possible for the researcher to obtain data required to meet specific objectives of the study and it guards the researcher against confusing the questions since the interviewer can clarify the questions thereby helping the respondent give relevant responses. In this study six out of nine heads of departments were interviewed. The heads of

departments were interviewed as they are accountable with the actions undertaken by staff concerning the EDRMS in their respective departments.

3.7 Ethical considerations

Ethics is a term that refers to norms/behavior for conduct that distinguishes between acceptable and unacceptable behavior (Resnik 2007:44). Moreover, it is seen as methods, procedures, or perspectives by which one decides how to act and for analyzing complex problems and matters (Shamoo and Resnik 2003:23). According to Williman (2005:38) ethics refers to a code of behavior that is appropriate to academics especially when conducting research. Furthermore, Williman asserts that ethics is the appropriateness by which the researcher behaves in relation to the rights of those who become the subject of the study or those affected by it. He however notes that these behaviors will vary depending on the norms of behavior that prevail which will in reality allow for a range of ethical positions. Researchers therefore need to take into consideration ethical issues when conducting research and should remain sensitive to the impact of the research on those whom the researcher seeks help.

Mugenda and Mugenda (1999:22); Saunders, Lewis & Thornhill (2003:31); Dooley (2004:43); Hart (2005:26) say that ethical concerns include confidentiality, plagiarism, honesty, objectivity, respect of intellectual property, dissemination of findings, anonymity, non-discrimination, voluntary and informed consent, academic freedom, social responsibility and respect for colleagues

3.8 Data Analysis

According to Carl & Louise (2003:29) data analysis is the act of transforming data with the aim of extracting useful information and facilitating conclusions. Moreover, it's the process of looking at data and summarizing it with the intention of getting useful information.

Amaratunga (2002:53); Gibbs (2002:14); Lewins, Taylor & Gibbs (2005:32) states that data analysis process involves the following key steps: describing the population sample ; ordering and reducing/coding the data (processing data); display of data

summaries in a way that facilitates easy interpretation of data, for example, by preparation of compilation sheets, flowcharts, diagrams or matrices; draw conclusions, relate these to the other data sets of the study and decide how to integrate the data in the report; and if required, develop strategies for further testing or confirming the (qualitative) data in order to prove their validity Analysis and presentation of data for this study was done based on the objectives of the study. Tables, graphs and figures were used in presentation of the study findings. Descriptive data analysis was used in this study. Descriptive data analysis are numbers that summarize the data with the purpose of describing what occurred in the study sample or population. The data was entered in Epi info data analysis application and the data set were imported in spss for analysis. Frequency distribution, mean, median and mode were used in accomplishing the data analysis task for this study.

3.9 Summary

This researcher presented the study methodology in this chapter. He further elaborated on how the population sample size of the study was identified, how data was collected, presented, analyzed and interpreted.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and interprets the findings of the study. Data was collected through questionnaires and face-to-face interviews. Data presentation is descriptive in nature and analysis has been done according to study objectives. The presentation of the data has been done according to the way the questions were structured on the interview schedules following the study objectives and as per the respondents' categories. Tables and figures were used to present data.

4.2 Respondent's response rate

The respondent's response rates were calculated on the number of MoHEST employees who completed the questionnaires divided by the number of people who were eligible for the study based on the population.

Participation or response rates were quite high with 93% (40 out of 43) of the eligible respondents completing the questionnaires. The response rate for interviews was fairly low with only 67% (6 out of 9) of the eligible respondents being interviewed, however it was still large enough to provide estimates with a high level of precision.

Table 4.1: Respondents response rate

CADRE	Study Population size	Response rate	Percentage response rate
Records staff	3	3	100%
IT staff	10	10	100%
Department Heads	9	6	67%
Clerical Officers	**30**	27	90%
Total	**52**	**46**	**88%**

4.3 Distribution of Respondents by Background Characteristics

Majority of the respondents were male constituting 74%, whilst the rest were female 26%. A total of 88% (46 out of 52) respondents participated in the study. The respondents were asked about their education level, 2.2% (1 out of 46) said to have done the Kenya Certificate of Secondary Education, 13% (6 out of 46)indicated that they have done a certificate course, 56.5% (26 out of 46) are diploma holders, whereas 26.1% (12 out of 46)are degree holders. The respondents were asked how long they have worked with MoHEST, 41% (19 out of 46) reported to have worked between 2 to 6 years, 50% (23 out of 46) indicated that they have worked between 6 to 10 years, whereas 7% (3 out of 46) reported to have worked with MoHEST for a period between 10 to 14 years and 2% (1 out of 46) of the respondents indicated having worked in MoHEST for over 14 years. 83% (38 out of 46) of the respondents indicated they have undertaken a training records and archives management, whereas 8% (8 out of 46) have not trained on records and archives management. Below is a summary of presented in the table.

Table 4.2: Distribution of Respondents by Background Characteristics

Background Characteristics	No. of respondents	Percentage (%)
Gender		
Male	34	74%
Female	12	26%
Roles in MoHEST		
Records	3	6.5%
IT Manager	10	21.7%
Department Heads	6	13.0%
Clerical Officer	27	58.6%
Education Level		
KCSE or Equivalent	1	2.2%
Certificate	6	13.0%
Diploma	26	56.5%
Bachelor's Degree	12	26.1%
Master's Degree	1	2.2%
PHD		0%
How long they have worked in MoHEST		
2 years and below		0%
2 – 6 years	19	41%

6 – 10 years	23	50%
10 – 14 years	3	7%
Over 14years	1	2%
Trained on Records/Archives Management		
Trained	38	83%
Not Trained	8	17%
Areas Trained		
Creation/capture	5	11%
Records Life Cycle	6	13%
Paper Records	13	28%
Electronic Records	10	22%
Storage and Maintenance	4	8%
Access Use and Tracking	4	9%
Disposition	4	9%
Use of EDRMS		
Use EDRMS	37	80%
Not use EDRMS	9	20%
How long used EDRMS		
1 year and below	39	84.4%

4.4 Records Management Policy

Records Management Policy seeks to ensure that MoHEST records, especially those that are required for compliance with the law, are retained for a sufficient period of time. In addition, the Policy seeks to ensure that both paper and electronic records are preserved**.**

The policy provides a framework and assigns responsibilities for ensuring that full and accurate records of the business activities of MoHEST are created, maintained, accessed and disposed of in a controlled manner. In addition, ensures that these records are maintained for as long as they are required to support operational, legal, audit or cultural needs, until their disposal in accordance with an authorised disposal schedule. This policy, and the resultant records management programme of work, represents one essential component of the MoHEST's broader approach to the management of its information. Respondents were asked whether they are aware of existence of records management policy at MoHEST.

Majority of respondents (59%) said that they are not aware of existence of records management's policy. Even though, 35% admitted that there exist a records management policy. Only 7% said that there records management policy doesn't exist. 28% of respondents who said that records management policy exist however said that its contents is known to a very small extent.

Governmental bodies should recognize their responsibility to the public by implementing and maintaining sound records management practices. To ensure that records management receives the attention it deserves, it should be a strategic objective in the governmental body's strategic and business plans. Heads of governmental bodies should also ensure that they budget for the records management function and that the necessary financial, human and technological resources are allocated to support the records management function.

Out of the 59% of the respondents who said that the policy exist, findings show 80% said that it is implemented at a very small extent, 6.7% of the respondents however said that the policy is not fully implemented. This was the same case for those who said that policy is implemented at a large extent (6.7%).

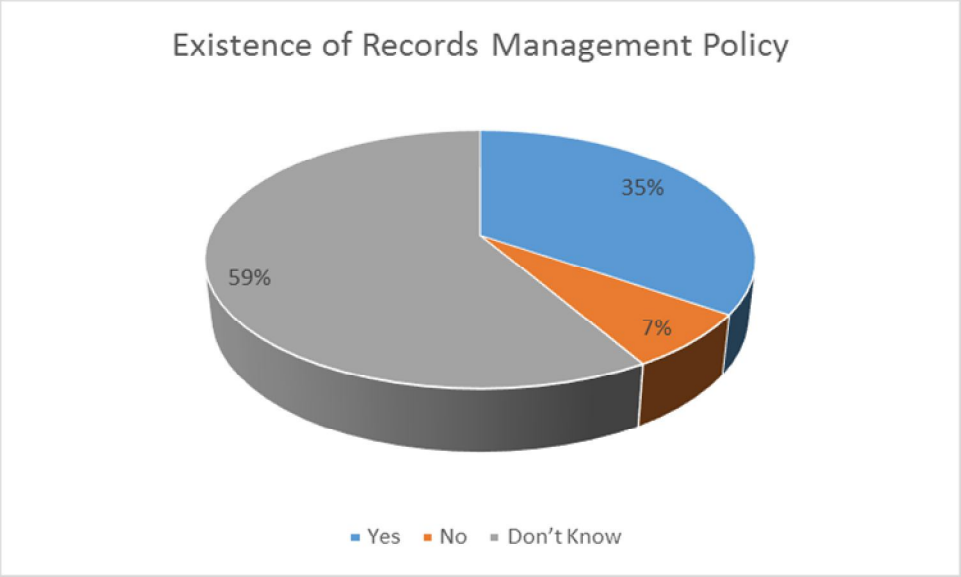

Figure 4.1: Existence of Records Management Policy

As with many of the challenges, records management policies may be defined but not implemented consistently across the organizations. Individual divisions may not have the budget, staff, or necessary training allocated to execute the policy sufficiently. A records management risk assessment will however identify potential risks so that policies can be improved to mitigate them. Assessing the needs of product and business development teams to access vital records for licensing can help establish the necessary secure-access turnaround times for vital documents. As such the policy is key document in this process. Compliance with this policy is mandatory for all staff. All officers working for the department have a responsibility to implement this policy and to maintain sound recordkeeping practices in their day to day work.

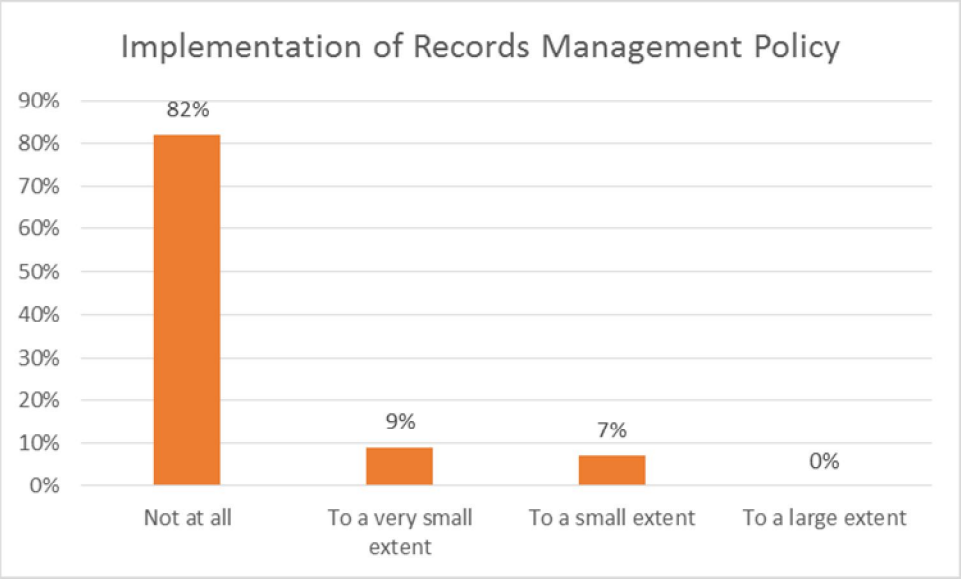

Figure 4.2: Implementation of Records Management Policy

Staff sensitization on the records management policy is key for the implementation of the policy. This is to ensure that the policies and procedures have been adopted and used across MoHEST. The findings clearly indicate existence of gap in the sensitization of the policy as 73% reported that the sensitization was done at a very small extent. However, of all the respondents none of them said that they were never sensitized whilst 20% and 7% said that it was done to a small extent and large extent respectively.

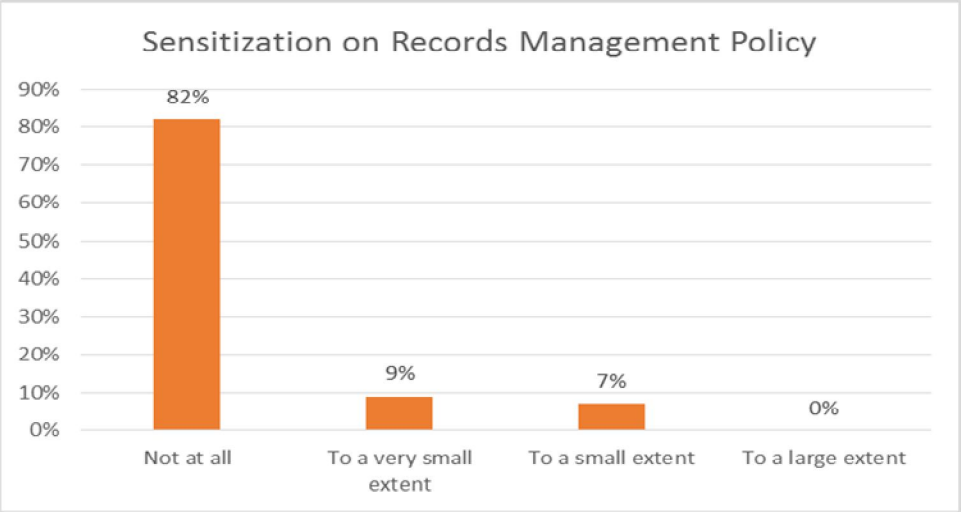

Figure 4.3: Sensitization on Records Management Policy

The findings established that 23.3% of the staff at MoHEST were sensitized on creation capture and receipt. The other area in which the responded revealed a high percentage on sensitization on the policy was storage and maintenance of records representing (21.7%), and access, use and tracking getting a response rate of 20%.

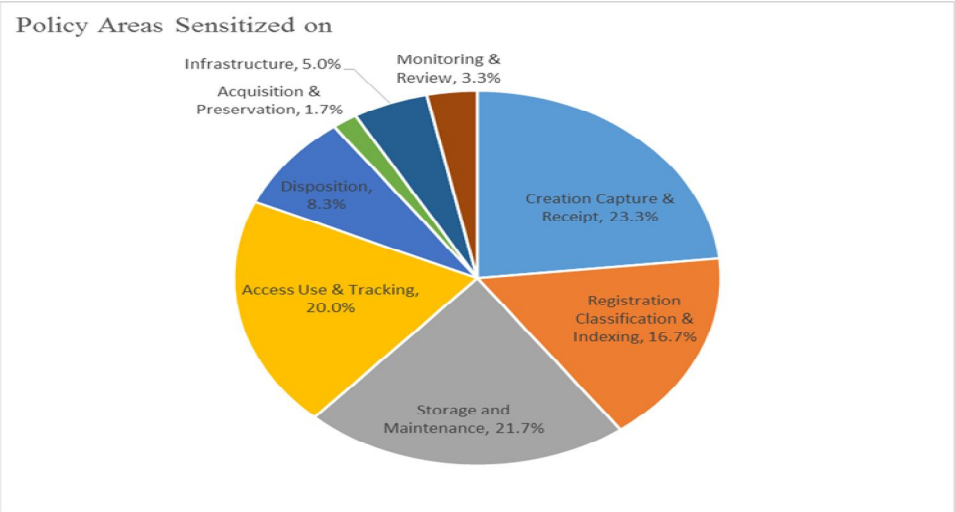

Figure 4.4: Sensitized areas on policy

4.5 Implementation and user needs assessment

User needs analysis is a crucial aspect in implementing any system in an organization. It helps in capturing the needs of the users and analyzing them appropriately. The

respondents were asked whether user needs analysis was conducted before introducing the EDRMS at MoHEST. 50% of the respondents indicated that user needs was not conducted at all, whereas 43% reported that it was done at a very small extent and lastly 7% revealed that it was done to a small extent. The graph below gives a clear summary of the respondent's feedback.

Table 4.3: User needs analysis

User needs analysis					
		Frequency	Percent	Valid Percent	
	Not at all	23	50	50	
	To a very small extent	20	43	43	
	To a small extent	3	7	7	
	Total	46	100	100	

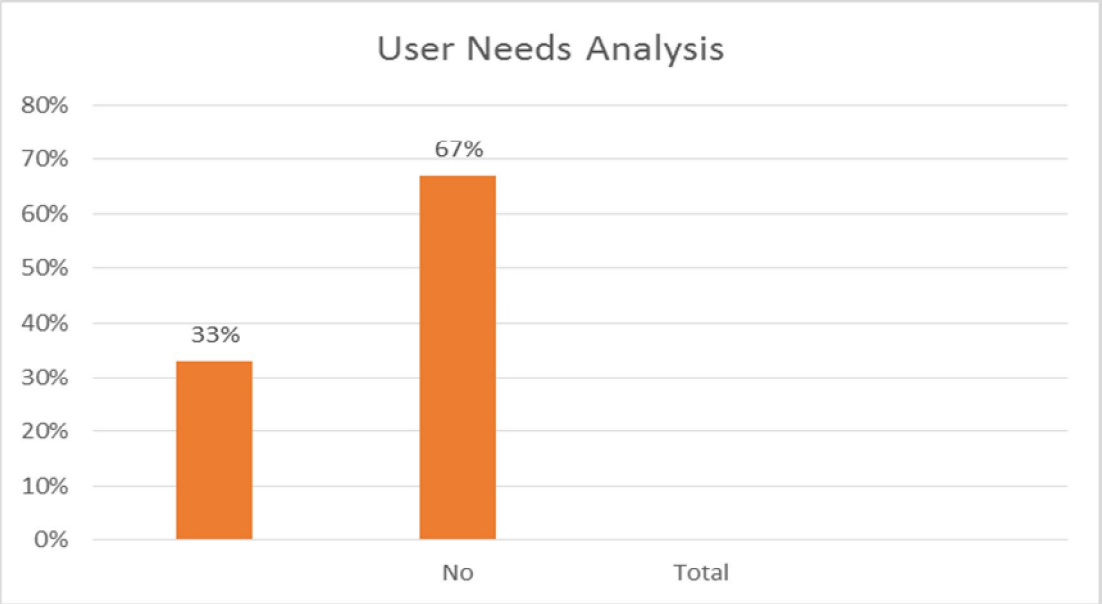

Figure 4.5: User Needs Analysis

4.5.1 Implementation of EDRMS

The main objective of the pre-installation phase is to set a firm foundation upon which the system shall be operationalized and provide guidelines to ensure that the subsequent phases of the project that is installation, customization and configuration of the system, does not only meet the business needs of an organization but also adheres to established professionalism and best practices in records management. The respondents were asked whether implementation of the EDRMS was done in phases so as to give the users time to assess the system. The responses were as follows; - 33% of the respondents said that the implementation was done in phases, 67% reported that it wasn't done in phases. The table below gives a summary of the respondent's feedback.

Table 4.4: Implementing EDRMS in Phases

Implementation EDRMS In Phases		
	Frequency	Percent
YES	15	33%
NO	31	67%
Total	**46**	**100%**

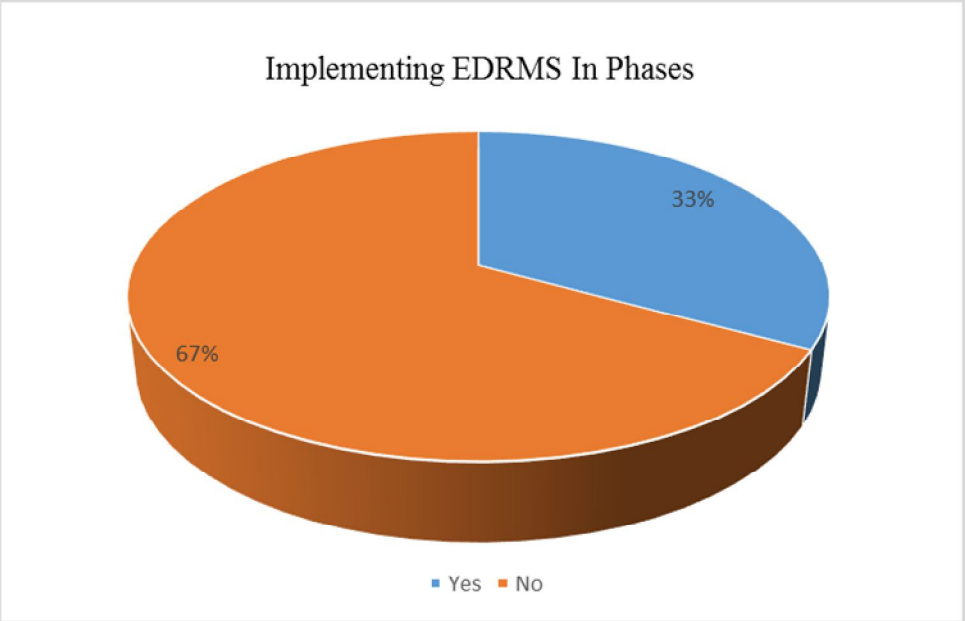

Figure 4.6: Implementing EDRMS in phases

4.5.2 User training

Training enables users familiarize and understand how the system operates. Most EDRMS projects fail due to insufficient training given to the users. User training is very fundamental in ensuring a success of records management projects. Organization's need to invest a lot on training and building their users capacity on using the system. The respondents were asked whether they were trained on the use of EDRMS. A majority of the respondents (83%) reported that they were trained to a small extent whereas 11% of the respondents reported to have been trained on the use of EDRMS to a large extent. Most of the respondents indicated that at the very initial stage when the system was introduced is when they were trained and afterwards nothing else followed hence leading to a majority of them forgetting their passwords and usernames of logging into the system.

Table 4.5 User training on EDRMS

User training on EDRMS		
	Frequency	Percent
Not at all	1	2%
To a very small extent	2	4%
To a small extent	38	83%
To a large extent	5	11%
Total	46	100

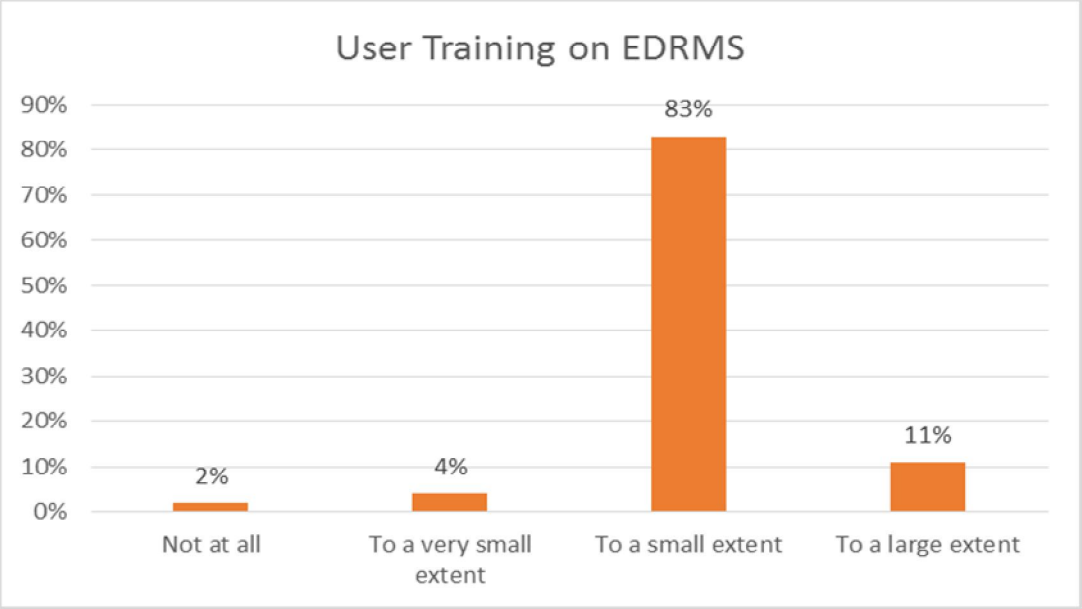

Figure 4.7: User Training on EDRMS

4.5.3 Staff understanding on EDRMS

Most organizations have electronic document and records management systems which the users doesn't clearly understand how they work. It is a good initiative to have all users to understand the system that they work with to enable them deliver their duties effectively using these technologies. The respondents were asked whether all staff understand EDRMS. 57% of the respondents reported that the staff understand the EDRMS to a small extent, 47% recording to a very small extent whereas 2% reported that they don't understand the EDRMS at all. This statistics clearly reveal that there is a gap more so on training and building capacity to the users on what the EDRMS is all about and how it works. The figure below presents a summary of the findings.

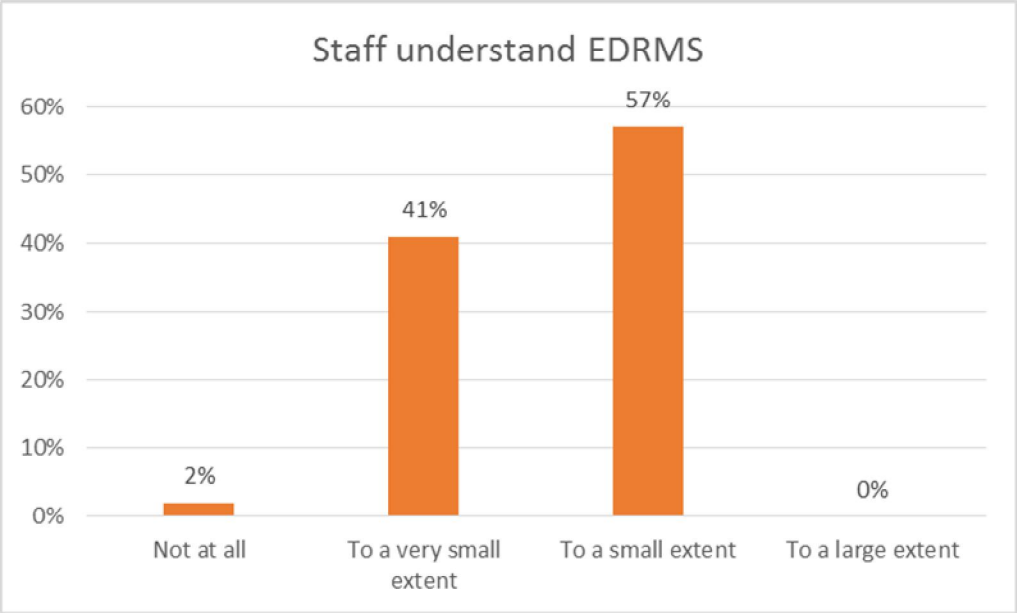

Figure 4.8: Staff understand EDRMS

4.5.4 Importance of EDRMS

The importance of EDRMS includes; - improving access, cost saving, assisting preservation of the original by reducing its wear and tear, information sharing, among others. Searching for information materials in a manual system does not only consume time but is also tiring and cumbersome whereas in EDRMS it eases the retrieval process as long as the manual system has been streamlined. Understanding the importance of the system motivates users in taking advantages of the opportunities accrued by using it. The respondents were asked whether they understand the importance of the EDRMS. 73% of the respondents revealed that they understand it to a small extent, 20% of the respondents indicated that they understand it to a large extent whereas only 7% indicated that they know it to a very small extent. This statistics reveals that a majority of the users understand the EDRMS slightly followed by a few who know the importance of the EDRMS.

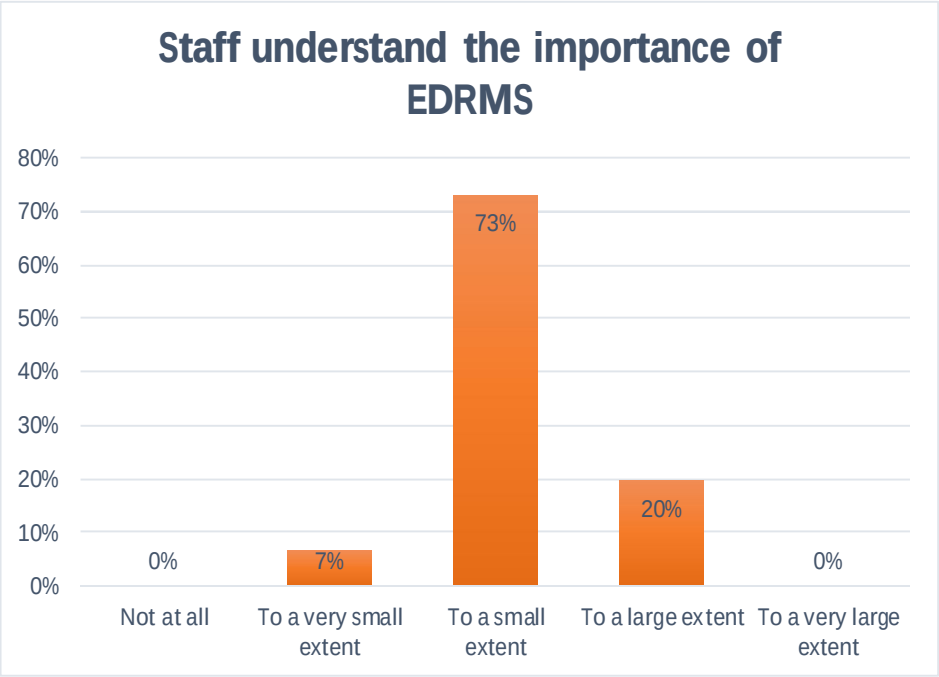

Figure 4.9: Staff understand the Importance of EDRMS

4.5.5 Staff Prefer using EDRMS

Any system is as good as nothing if it isn't utilized to the fullest. Making use of the system is very important especially after it has been installed, customized and tested by the consultants or the system vendors. The respondents were asked whether they would prefer use of EDRMS. A majority of them (76%) said not at all whereas 24% indicated that they would prefer using it to a very small extent. Despite the fact that EDRMS brings more benefits to an organization, MoHEST staff don't prefer using it at all. Based on the respondent's feedback, it clearly indicates that there is low confidence level on using EDRMS. The figure below shows the respondents response on whether they would prefer using the EDRMS.

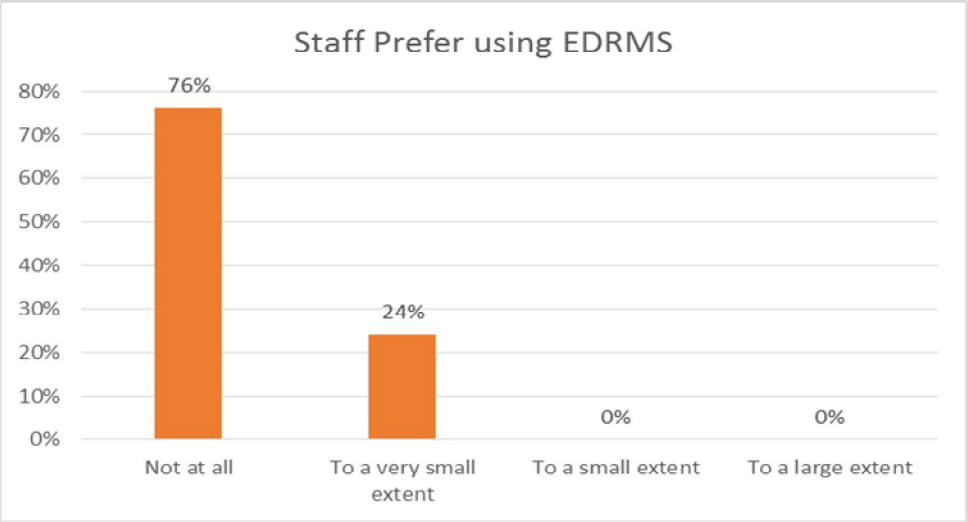

Figure 4.10: Staff Prefer using EDRMS

4.5.6 Users opinion on satisfaction with EDRMS

The respondents were asked to describe their opinion on whether they are satisfied with using EDRMS in MoHEST. This question was asked to gauge whether the EDRMS really satisfies the users. The findings revealed that 26% of the respondents indicated that they are not satisfied with the EDRMS, on the other hand, 70% of the respondents indicated that they are more or less satisfied with using the EDRMS, whereas only 4% of the respondents reported that they are very satisfied with the system. Based on these findings, it is very clear that the users are not satisfied with the system thus, justifies the why the EDRMS hasn't been implemented yet regardless of it being installed in four years ago (2010). Below is a detailed summary of the findings presented in the table and pie chart.

Table 4.6: User Satisfaction on EDRMS

User Satisfaction on EDRMS		
	Frequency	Percent
I am very satisfied with EDRMS	2	4%
I am not satisfied with EDRMS	32	70%
I am more or less satisfied with EDRMS	12	26%
Total	46	100%

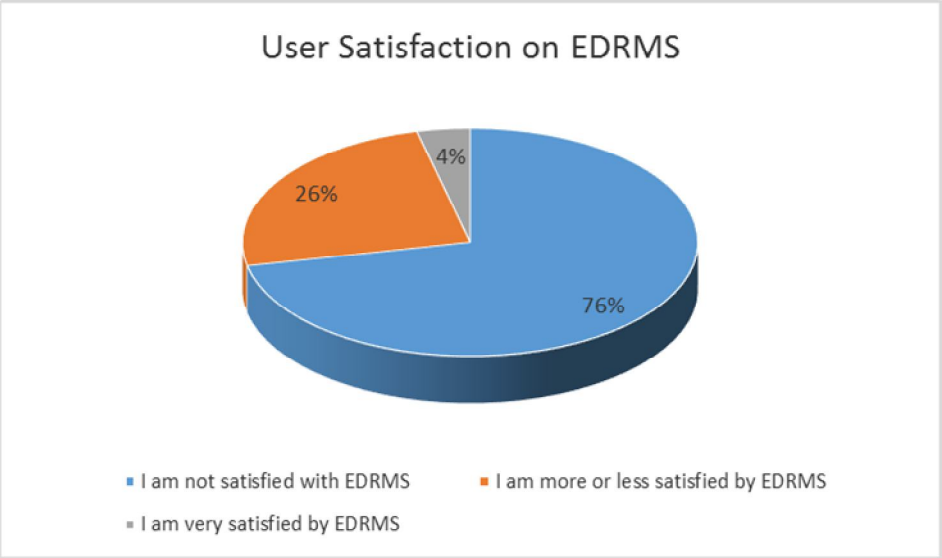

Figure 4.11: User Satisfaction on EDRMS

4.6 Opportunities of using EDRMS

An electronic document and records management system is as good as nothing if it is not in operation. Research has revealed that 75% of EDRMS projects collapse in most organisation thus leading to loss of financial resources pumped into the project. There are numerous business opportunities in which organisations accrue by operationalising EDRMS among them is gaining business competitive advantage especially in service delivery and enhancing simultaneous access to information by users irespective of the geographical location. The respondents were asked what is the level of operationalisation of EDRMS at MoHEST. A majority of the respondents (91%) indicated that it is operationalised to a very small extent as presented in the graph below. They reported that it has been in operation in less than a year then afterwards the project stalled.

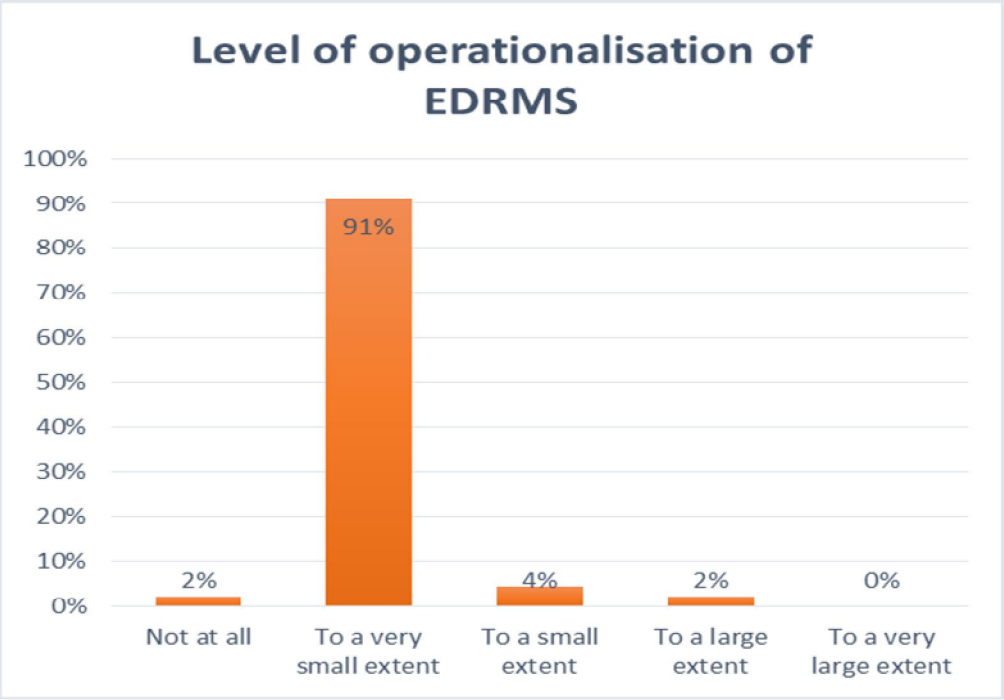

Figure 4.12: Level of operationalization of EDRMS

4.6.1 User satisfaction on the system developers response rate

Users generally prefers getting fast and quick feedback from the system developers. An effective user satisfaction focuses on measuring customer satisfaction on how well the system developers delivers. The speed in which the developers respond to users request is very crucial as it motivates or demotivates the system users. For instance, in case of a system failure, how fast do the developers respond to curb that problem? The respondents were asked to give their views about satisfaction by users on the responsiveness from the system developer. A majority of the respondents comprising 63% reported that user satisfaction has been felt to a very small extent, 22% of the respondents reported that user satisfaction is not felt at all, whereas 11% indicated that it is felt to a small extent and lastly, 4% of the respondents reported to a large extent. Based on this statistics, it is evident that users are not well satisfied by the responsiveness of the system developers which could be a possibility of them forgeting usernames and passwords. Below is a bar graph that depicts the respondents feedback.

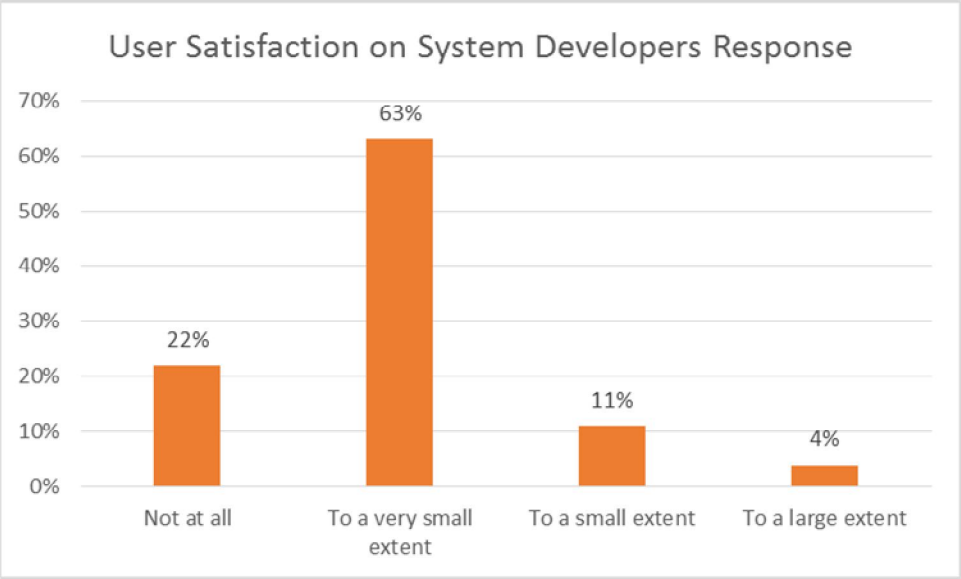

Figure 4.13: User satisfaction on system developers response

4.6.2 User (MoHEST staff) satisfaction survey

Staff satisfaction survey provide the management with knowledge and tools to build positive employee relations with the EDRMS at MoHEST. It assists in measuring user's attitudes, opinions, motivation and satisfaction in using the system. It is prudent for any organization to develop staff satisfaction survey that captures some characteristics of the system. The respondents were asked whether staff satisfaction survey on EDRMS was carried out. 82% of the respondents reported that it hasn't been done at all, while 9% of the respondent reported that it was conducted in a very small extent and lastly, 2% reported that staff satisfaction was carried out to a small extent. Based on the respondent's views, it is outright clear that staff satisfaction survey wasn't carried out effectively. Below is a summary that depicts the respondent's response.

Figure 4.14: Staff satisfaction survey

4.7 Challenges facing implementation of EDRMS

There are a numerous of challenges that affect the implementation of EDRMS in organizations. Some of these challenges include the choice of the software that would meet the organizations business needs and integrate with key business of the organization. As much as there are challenges, there needs to be solutions to curb them in order for the system to be implemented successfully. 9% of the respondents reported that there is inadequate finances, 39% of the respondents reported that inadequate technical expertise poses a challenge in implementing whereas 30% ; 20% of the respondents indicated that resistance to change and inadequate documentation are the challenges facing implementation of the EDRMS respectively. The major challenges are resistance to change and inadequate technical expertise which can be addressed through taking the users through a training on change management and function of the system. Below is a detailed summary depicting the respondents' feedback on the challenges facing implementation of EDRMS in MoHEST.

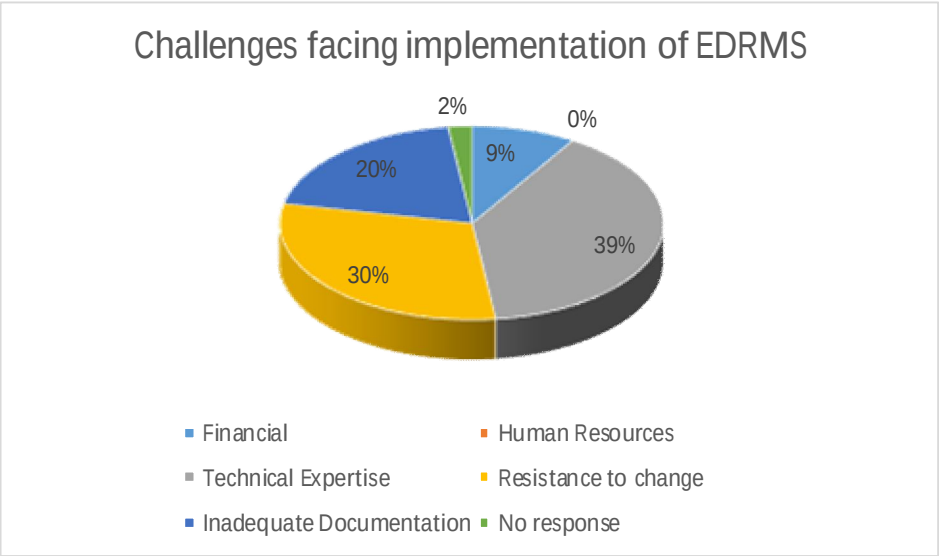

Figure 4.15: Challenges facing implementation of EDRMS

Duration of addressing the identified challenges is very significant to the system users. The faster the response of addressing the challenges the better to the system users. Many system users lose concentration and interest if the duration to address the challenges takes long. The respondents were asked how long it takes for the above challenges to be addressed. A majority of the respondents (98%) reported that it takes more than a week for the challenges to be addressed. They further reported that nothing among the challenges mentioned above has been addressed. The other challenge that was revealed from this study was forgetting of user credentials required to log on to the system by the users. It was reported that most of the system users (MoHEST staff) can't remember their passwords and user name that was set for them by the system administrator.

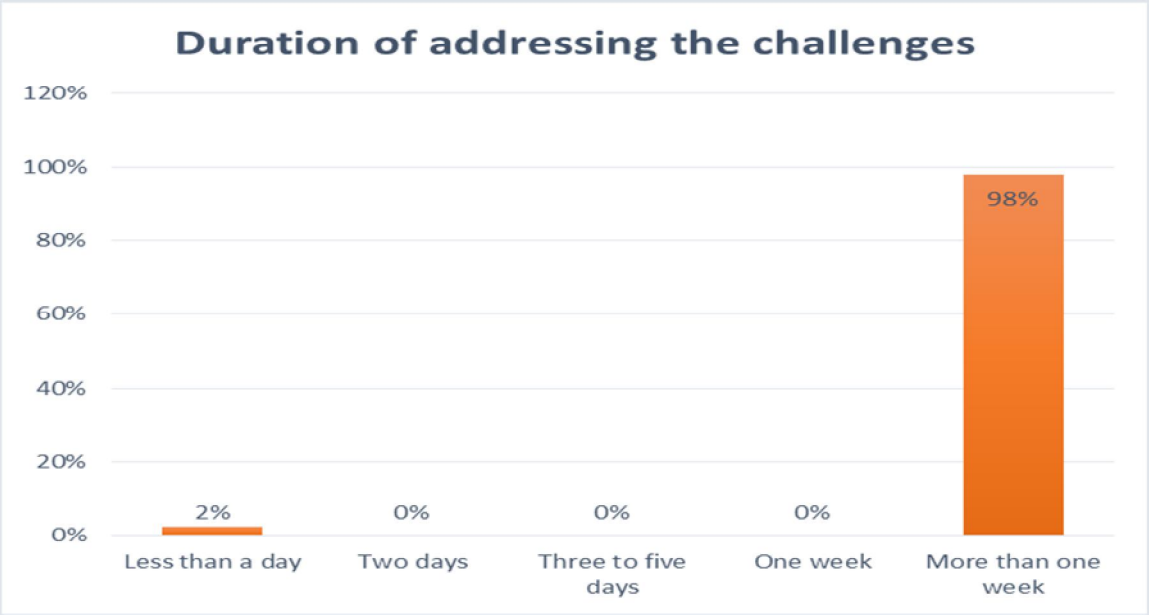

Figure 4.16: Duration of addressing challenges of EDRMS

The respondents were asked to recommend whether they would want the EDRMS to be used in other Ministries. 85% reported recommended the system to be used in other Ministries whereas 13% opposed. Based on this recommendation, it is clear from the respondents that they support other Ministries to use the EDRMS. Below is a summary of the findings presented in the pie chart.

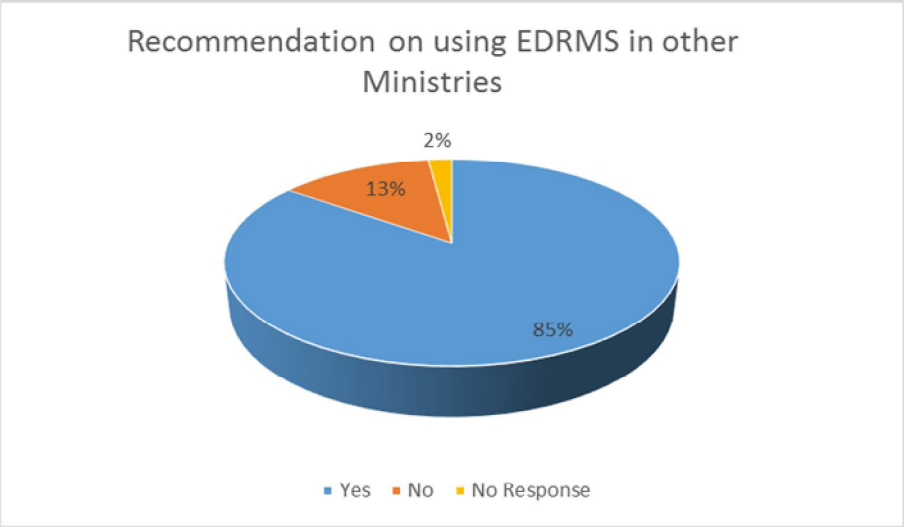

Figure 4.17: Recommendation on using EDRMS in other Ministries

CHAPTER FIVE

SUMMARY OF RESEARCH FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of research findings of the study, conclusions and recommendations. Interviews and questionnaires were used as sources of research findings. The aim of the study was to investigate the implementation of electronic document and records management system in the public sector: a case study of the Ministry of Higher Education Science and Technology.

The specific objectives of this study were;-

(i) To establish whether there is a policy framework for the implementation of EDRMS in MoHEST

(ii) To find out whether user needs (MoHEST Staff) were met by the EDRMS.

(iii) To find out the opportunities that exists by using EDRMS in MoHEST.

(iv) To identify the challenges facing implementation of EDRMS in MoHEST.

(v) To provide recommendations and a framework to enhance proper implementation of EDRMS in MoHEST.

5.2 Summary of Research Findings

This section provides a summary of the research findings based on the research questions that were formulated by the study.

5.2.1 Records Management Policy

In order to achieve a successful electronic records management programme, an organisation needs to establish a sustainable records management infrastructure, which includes developing policies for the management of records and information in all forms, including electronic and paper. It is recognized that an effective records policy whether for electronic records or records in all media is the result of an in-depth analysis of records operations and requirements within the organisation in question.

Therefore, in the ideal environment, a policy would not be developed or revised until the organisation had conducted surveys, established project plans, developed a business case and looked at the requirements for advocacy, outreach and change management.

Respondents were asked whether they are aware of existence of records management policy at MoHEST. Majority of respondents (59%) said that they are not aware of existence of records management's policy. Even though, 35% admitted that there exist a records management policy. Only 7% said that the records management policy doesn't exist. 28% of respondents who said that records management policy exist however said that its contents is known to a very small extent. A policy is as good as nothing if it is not known to the people intended for it. Therefore, it has to be cascaded and made available to everyone since records management cuts across all the departments in MoHEST.

5.2.2 Implementation and user assessment

EDRMS is associated with 'change' (Jeffrey-Cook 2005:3): change in terms of organizational recordkeeping culture, as well as in terms of individual working habits and responsibilities. Getting the system into place is (comparatively) easy, but ensuring that employees use it effectively is very difficult. As with any other enterprise wide Information Systems implementation, user resistance is the major hurdle for EDRMS uptake (Miller 2005:3).

Traditionally, records management is often considered to be the boring responsibility of administrative or records staff – but with the implementation of an EDRMS, records management suddenly becomes the responsibility of every employee in the organization. An all-encompassing communication strategy which involves staff from the very first stage of the project to the very end of the implementation is the core of a successful EDRMS change management plan (Wilkins et al. 2007:3).

Training enables users familiarize and understand how the system operates. Most EDRMS projects fail due to insufficient training given to the users. User training is

very fundamental in ensuring a success of records management projects. Organization's need to invest a lot on training and building their users capacity in using the system. Most of the respondents indicated that rigorous training was done at the very initial stage when the system was introduced then afterwards nothing else followed hence leading to a majority of them forgetting their passwords and usernames. The research revealed that training on EDRMS was done to a very small extent hence a majority of the respondents reported that they would not prefer using EDRMS at all. The research findings revealed that 67% of the respondents reported that implementation was done in phases to a small extent whereas only 13% reported that implementation was done in phases to a large extent.

The findings reveal that user needs assessment was not done well in MoHEST before the introduction of the system. The researcher asked whether user needs was conducted before the introduction of the system, 50% of the respondents indicated that user needs was not conducted at all, whereas 43% reported that it was done at a very small extent and lastly 7% revealed that it was done to a small extent.

User involvement was very minimal before the introduction of the system hence affecting the implementation of the system. The study also sort to find out whether MoHEST staff understand the EDRMS, the findings revealed that 73% of the respondents understand the EDRMS to a small extent, 20% of the respondents indicated that they understand it to a large extent whereas only 7% indicated that they know it to a very small extent**.** There is need for training of staff on the EDRMS since most of them don't understand how it operates. The EDRMS is not utilised effectively in MoHEST due to failure to capture the user needs at the initial stages before the introduction of the system. Most respondents (70%) are less satisfied with the system whereas 26% are more or less satisfied with the EDRMS due to inadequate training given to them.

5.2.3 Opportunities of using EDRMS

Electronic document and records management system brings in a lot of opportunities to organizations that are using them. Queensland Archives (2010:7) says that EDRMS

improves administrative efficiency and effectiveness; facilitates evidence-based and enhances making informed decisions; it helps in collaboration through avoidance of reinvention of the wheel' on developing documentation; secure and systematic management of unstructured data such as emails; documents and spreadsheets; efficiency gains with improved quality and consistency of organizational processes. The respondents were asked about the level of operationalisation of EDRMS at MoHEST. The findings revealed that 91% of the respondents indicated that the EDRMS was only operational in less than a year. The study also revealed that during that short time when the EDRMS was operational, it enhanced accountable and reduced duplication of records. The respondents were also asked whether they are satisfied with using the EDRMS, a majority of them (92%) reported that they are not satisfied with it and even said that they can't recall the usernames and passwords for accessing the system. Based on that revelation, it is very clear that system users (MoHEST staff) haven't benefited on the EDRMS.

5.2.4 Challenges facing implementation of EDRMS

Adequate and on-going training and support ensures staff awareness and maintains ongoing staff commitment to the system (Maguire 2005:3) – the ultimate goal of such an EDRMS project. EDRMS projects cannot be considered complete for at least 5 years after the initial implementation (Wilkins et al. 2007:3). A number of challenges have been revealed that face the implementation of EDRMS in MoHEST. Among them being insufficient training on staff on the records management policy, inadequate training on change management leading to resistance to change among staff; Insufficient documentation was also revealed as another challenge facing the implementation of EDRMS; lack of user needs analysis before the enrolment of the system; inadequate technical expertise; as well as inadequate finances for training staff on the system.

5.2.4.1 Inadequate training

Training is very significant for effective implementation of any EDRMS project. Pre-training assessment and post-training assessments should be conducted in order to prepare the users to adapt with the new environment of managing records. The study

has revealed that staff receive inadequate training on several aspects such as the awareness on the existence of the records management policy, training on use and importance of EDRMS and also they lack the necessary technical expertise to help them in implementing the system. The findings revealed that 39% of the respondents reported that inadequate technical expertise as a challenge in implementing EDRMS in MoHEST. This can be corrected through equipping the users (MoHEST staff) with necessary training.

5.2.4.2 Inadequate documentation

System documentation is vital for users in understanding functionalities of the EDRMS. The manual helps in understanding a step by step procedure of how a system works. The finding revealed that 20% of the respondents indicated that inadequate system documentation as another challenge that faces system implementation. System users (MoHEST staff) lack adequate manuals about the EDRMS.

5.2.4.3 Resistance to change

Most records management projects fail in organization due to resistance among staff/employees. Change management is an important aspect to be undertaken by the project team before the actual take off of the assignment or project. According to the Common Wealth of Australia (2011:13), an EDRMS implementation must be viewed as a major change management exercise. An EDRMS does not just involve a shift from paper to digital records. It requires senior management to champion how business information will be managed across the agency. Unless that change is managed effectively, you will not secure the user acceptance and buy-in that is essential for a successful implementation. It is important to have change management and communication strategies in place. The findings revealed that a majority of respondents (30%) reported that resistance to change as a major challenge in implementing EDRMS in MoHEST.

An essential change management activity should be building end user trust in the system. Moving to a new system that people are not familiar with will inevitably generate concerns about how effective and reliable it will be. Common concerns

include: What will happen to information if the system goes down? Will I be able to easily find what I am looking for? Will confidential or sensitive information I put into the system be adequately protected? Will using the system make my work more difficult and time consuming?

5.2.4.4 User needs analysis

The business needs and technical requirements of the people who will have to use the system are critical and need to be built into the requirements. Doing this from the start will assist an organisation throughout the project, including with: the design and configuration of the system – particularly the user interface, the development of business rules, identifying the readiness of work areas for an EDRMS implementation, identifying training requirements, change management and communication strategies (Common Wealth of Australia, 2011:12). The study revealed that 50% of the respondents said that user needs was not conducted at all, whereas 43% of the respondents on the other hand reported that user needs was conducted to a very small extent. User needs analysis assist an organisation throughout the lifecycle of a project hence it must be undertaken for successfully implementation of an EDRMS project.

5.2.4.5 Inadequate finances

An EDRMS implementation is a major project, requiring a significant commitment of time, money and staff (Common Wealth of Australia, 2011:10). The resource requirements will depend on factors such as your agency's size, its business needs and the amount of configuration necessary. The findings revealed that 9% of the respondents reported that inadequate finances being a challenge in implementing EDRMS in MoHEST. Adequate budget should be allocated for procuring licenses for the users, training staff, updating the system with current antiviruses in order to protect information stored in the system among other things. IRMT (2009) advocates that it is imperative that provision be made in the annual estimates of capital and running costs for sufficient funds to enable the records and archives institution and its departmental units to perform their functions properly. It also emphasize that each records management unit in an agency should have its own budget or at least, an adequate

allowance within the department of which it forms a part. It also suggests that records and archives institution should be able to manage its own budget.

Common Wealth of Australia (2011:11) observes that the cost and budget of implementing an EDRMS will depend on: the level of functionality rolled out, the extent of customization, the complexity of configuration needed to satisfy business needs, the work areas of the agency to be included and the extent of integration or interface with other business systems

5.3 Conclusion

The success of implementing an EDRMS is directly related to the amount of effort and collaboration that goes into planning a project. To ensure that everyone participates in the planning process, a project management team should be assembled to include department heads, IT experts, and records management professionals. User needs analysis also needs to be considered in preparation for an EDRMS implementation. A comprehensive needs analysis requires a great deal of work and should not be entrusted to the consultants. Project audits need also to be performed to document the implementation and record failures and successes. Top level management support is also fundamental when implementing EDRMS as they are the key decision makers for the organization. Lastly, training of system users (MoHEST staff) is critical towards accomplishing the goals and objectives of the Ministry.

5.4 Recommendations

Taking into consideration the findings of the study, electronic records management systems need to be improved to ensure that it's implemented successfully to the latter. Electronic document and records management systems need to be implemented to ensure timely retrieval of records for speedy decision making with regards to the organization's mandate. The study therefore makes the following recommendations:-

5.4.1 Develop a records management policy

MoHEST should develop a records management policy and have it endorsed by the top level management before cascading it to the employees. The policy will help in developing and implementing best practice for electronic records creation, management and preservation. It will also ensure that records created by the Ministry have relevant content, context and format and they are accurate and timely and under control. A records policy could be as good as nothing if it isn't in use hence there should be a need for support from the top level management. The policy enable all persons involved in managing records receive necessary training.

5.4.2 Training on electronic records management systems and change management

Providing appropriate training is essential to change management and securing end user acceptance and buy-in. A training plan should be developed early in the project. This will assist the project team to understand the training needs for all levels of staff, tailor training to target specific needs of individual business areas, and identify resources required to implement the training plan.

Staff should be trained on electronic records management as well as on systems for managing records. This will enable them utilize the system to the fullest and interact with it comfortably as they work on their day to day tasks. Change is a constant feature of organizational life and the ability to manage it is seen as a core competence of successful organizations. However, It is perceived to have significant differences such as: being incremental, punctuated or continuous; the point to which change is driven is

also a concern, that is, is it driven in an organization from the top management to the junior staff or is it an emergent process. MoHEST staff should be trained on change management as they are transiting from manual to electronic records management system. Staff should take more personal responsibility for managing records once an EDRMS is implemented – they will need to know basic things such as what to keep, how to name it, and when security and access controls should be applied.

Staff will also need specific training in any new business rules or tools that have been put in place as part of an EDRMS implementation, such as how to use a new file plan or records classification scheme.

5.4.3 Provision of adequate documentation / system manual to the users

The findings of the study revealed that there is inadequate documentation available for the users. Therefore, provision of adequate documentation about the system will enable the system users be conversant with how the system works. The documentation also enables the users to read through on their own thus minimizing the queries to the system vendors on how the system works. The manuals provide important information to the users on how to use the EDRMS as well as limiting legal liabilities on misuse of a product.

5.4.4 Invest on technical expertise to support system implementation

Variety in skills and expertise makes for a quality product. MoHEST should invest on technical experts to support system the system implementation process. Inadequate expertise was among the major challenges facing the implementation of EDRMS. Therefore MoHEST should train its staff in order for them to acquire necessary technical skills on the system.

5.4.5 Provision of adequate finances

MoHEST should have a dedicated budget for the records management unit to support records management activities. The study revealed that there are inadequate financial resources allocated to records management unit. IRMT (2009) advocates that it is imperative that provision be made in the annual estimates of capital and running costs for sufficient funds to enable the records and archives institution and its departmental

units to perform their functions properly. It also emphasize that each records management unit in an agency should have its own budget or at least, an adequate allowance within the department of which it forms a part. It also suggests that records and archives institution should be able to manage its own budget. Value for money should be achieved through a plan for expenditure on staff, accommodation, equipment, and materials that matches the requirements for the delivery of an efficient and economical records management program

5.4.6 Adopt Dirks methodology framework to implement the EDRMS at MoHEST

The DIRKS methodology provides the foundation for good recordkeeping. The DIRKS methodology is an 8-step process designed to assist organizations to improve their management of records and information. It is based on and expands the best-practice approach outlined in Australian Standard AS 4390-1996, Records Management and International Standard ISO 15489, Records Management and the accompanying technical report. The methodology is a structured and rigorous approach designed to ensure that records and information management is firmly based in the business needs of the organization. MoHEST should adopt the Dirks Methodology framework to enable them successfully implement the EDRMS.

5.4.7 Business continuity planning

Loss of digital records in a disaster can be crippling for an agency. Without records, business operations are adversely affected, corporate memory is lost and agencies are vulnerable to greater risk. MoHEST should cover all their digital records, information and systems in a business continuity plan.

5.4.8 Planning for long-term retention of digital records

There would be digital records that have retention periods greater than one generation of technology (that is, five to seven years). This poses a challenge in terms of ensuring these records are retained and remain accessible for as long as legal, business and accountability requirements demand. MoHEST should consider; - inevitable hardware

and software obsolescence over time, the need to upgrade systems on a regular basis, vendors no longer supporting superseded versions of EDRMS software, processes for identifying and retaining longer-term records, and records that are identified for eventual transfer to the Archives.

5.5 Suggestion for further research

Further research on EDRMS and open governance in Kenya would be useful to advise the Public Sector on how it can comprehensively take advantage of the technologies in place for managing electronic records and information.

5.6 Summary

This chapter has covered the introduction, summary of research findings, recommendations, and suggestions for further research.

References

Arrangement all your references according to APA by making proper 'indent' for each reference

Amaratunga, D. et al (2002). *"Quantitative and Qualitative Research in Built Environment" In Work Study*. Vol.5 (1): 17-31

Asprey, L., & Middleton, M. (2003). *Integrative document and content management:* Available at http://www.socialresearchmethods.net [17.01.2014]

Bearman, D. (2004). *Electronic evidence: strategies for managing records in contemporary organizations.* Pittsburgh: Archives and Museum Informatics.

Bless C. and Higsonn-Smith, C. (1995). *Fundamental of social research methods*. Zambia: Juta Education Pty.

Bogdan, R.C. and Biklen, S.K. (2003). *Qualitative research for education*. *An introduction for theory and methods*. Boston: Allyn and Bacon.

Bryant, J. and Miron, D. (2006). *Theory & Research in Mass Communication*. *Journal of Communication.* Vol.54 (4):662-704

Bryman, A.and Crame, D. (2008). *Quantitative Data Analysis with SPSS 12 and 13: A guide for Social Scientists*. UK: Routledge.

Bureau of Justice Assistance, BJA.(2005). *Program Evaluation.* [Online]. Available at http:// www.ojp.usdoj.gov/BJA/evaluation/glossary-t.htm [Accessed 27 January 2014].

Carl, F. and Louise, B. S. (2003). *Qualitative Data: An Introduction to Coding and Analysis*. New York: NYU Press.

Churchill, G.A. (1995). *Marketing research: methodologies foundations.* London: The Dryden press.

Davenport, T.H. (1998). *"Putting the enterprise into the enterprise system*," Harvard Business Review (76:4), pp121-131.

Day C, Sammons, P. and Gu, Q. (2008). *"Combining Qualitative and Quantitative Methodologies in Research on Teachers' Lives, Work, and Effectiveness*".

Dellinger, A. (2005). *Validity and the Review of Literature*. Research in the Schools, 12(2), 41-54. *EContent*, *29*(8), 38–43

Ellis, J. (2005). *Implementing a solution for electronic recordkeeping in the public sector*. London: Facet Publishing. ESARBICA Journal, Vol. 21, pp. 114-9.

Fanning, B. (2007). *Standards to manage electronic records*. *AIIM E – Doc Magazine, 21*(6): 60–61. Fighting through the acronyms towards a strategy for effective corporate Records

Freeman, R. and Haddow, G. (2008). *Research Skills in the Social Sciences: Data Collection*. Available at http://www.sps.edu.ac.uk [19.02.2014]

Fuzeau, P. (2005). *Records management: two case studies from the French private sector*. London: Facet Publishing.

Gautam, B. (2008). *Genesis of an Academic Research Program in Journal of Research Practice* vol.4 no.1

Gibbs, G. R. (2002) *Qualitative data Analysis: Exploration with Nvivo*. Buckingahm: Open University Press.

Gregory, K. (2005). *Implementing an electronic records management system: a public Sector*

Guest, G., Bunce, A. and Johnson, L. (2006). "*How Many Interviews are Enough" Field Methods*, Vol. 18, No. 1, 59-82.

Harper, D. (2008). "*Theory" In Online Etymology Dictionary*

Hawryszkiewycz, I. (2001). *Introduction to Systems Analysis and Design 4th edition.* New Delhi: Prentice Hall, 2001.

Hopkins, W. G. (2000). *Quantitative Research Design*. Available at http://www.sportsci.org [18.02.2014]

Hughes, C. (2003). *Opportunities for Records Managers Working in Private Sector*. *Records Management Journal*. Vol13. Issue 3:117-122

International Standards Organization (2001). *Information and Documentation: Records Management Standard*. Geneva: International standards Organization.

IRMT. (2009). *Training in electronic records management: Understanding the context of electronic records*. London: IRMT.

ISO. (2001). *Information and documentation – records management*. Switzerland: ISO.

Jeffrey-Cook, R. (2005). *Preparing to Implement a Corporate EDRMS*, Inform Consult Ltd.

Jerspersen, K. R. (2005). *"Applying a Behavioral Simulation for the Collection of Data" in Electronic Journal of Business Research Methods.* Vol 3(2) pg.141

John, O. (2008). *Handbook of Personality: Theory and Research*. Guilford Publications

Johnston, G.P. and Bowen, D.V. (2005). *The benefits of electronic records management systems: a general review of published and some unpublished cases*", *Records Management Journal*, Vol. 15 No. 3, pp. 131-40.

Jordan, J. et al (2007). *Using Focus Groups to Research Sensitive Issues: Insights from Group Interviews on Nursing in the Northern Ireland "Troubles" International Journal of Qualitative Methods.* Vol.6 no.4 pg 1-19

Joseph, P. (2010). *EDRMS search behaviour: implications for records management principles*

Joseph, Pauline. (2008). *EDRMS 101: the basics. Information and Records Management Annual* (IRMA). 25: pp.9-26.

Kemoni, H. (2007). *Records Management Practices and Public Service Delivery in Kenya*. PhD Thesis, University of KwaZulu-Natal , South Africa

Kothari, C. R. (2004). *Research Methodology: Methods & Techniques*. New Delhi: Prakashan.

Kothari, C.R. (2004). *Research methodology: methods and Techniques*. New Delhi: New Age International.

Kumar, R. (2005). *Research Methodology*. London: Sage.

Kwatsha, N. (2010). *Factors affecting the implementation of electronic document and recordslearned from a landmark EDRMS implementation", Records Management* Journal, Vol. 19

Leddy, P.D. (1997). *Practical research planning and design*, 6th ed, Upper Saddle River, NJ Merrill/Prentice Hall

Lewins, A., Taylor, C, and Gibbs, G. R. (2005). *What is Qualitative Data Analysis* (QDA). Available at http://www.onlineqda.hu.ac.uk [20.01.2014]

Luisa, M, and Ibiricu, B. (2008). *Records Management Journal* Vol. 18 No. 3, pp. 170-179 Emerald Group Publishing Limited 0956-5698

Lyons, K. (2005). *How to conduct a Literature Review.* Available at http://www. library.ucsc.edu/ref/howto/literaturereview.html [20.01.2014]

Maguire, R. (2005). *Lessons learned from implementing an electronic records management system," Records Management Journal (15:3) management systems", MPhil dissertation*, Stellenbosch: University of Stellenbosch.

Miller, J.M. (2005). "User's Issues Arising from EDRMS Implementation," Performance Psychology Ltd.

Mugenda, O. & Mugenda, A. (1999). *Research methods: quantitative and qualitative approaches*. Nairobi: Acts Press.

Mugenda, O. & Mugenda, A. (2003). *Revised research methods: quantitative and qualitative approaches*. Nairobi: Acts Press.

Mugo, F. W. (1995). *Sampling in Research.* Available at http://www.socialresearchmethods.net [17.05.2014]

Murphy, G.E. (2008). "*Finding the Dream Team: Recruiting for Electronic Document and Records Management System (EDRMS) Projects," in: IRMA Information and Records Management Annual*, pp. 187-199.

Mutiti, N (2001). *"Challenges of Electronic records in the Esarbica region" ESARBICA Journal vol*. 20 pp.57-61

NARA. (2007). *Records Management, Document management and Content Management*. Available at http://www.alliancegroup.co.uk/record-document.htm [26.01.2014]

National Archives and Records Service of South Africa (2006). *Performance criteria for records managers in governmental bodies*. Available at https://docs.google.com/viewer?a=v&q=cache:1fhtU8h28A8J:www.national.archives.gov.za/rms/NARS_DMLIB

Nguyen, L.T., Swatman, P.M.C., and Fraunholz, B. (2008). *Australian Public Sector Adoption of EDRMS: A Preliminary Survey," Australasia Conference on Information Systems,* New Zealand: Christchurch.

Nguyen, T-L., Swatman, P.M.C. and Fraunholz, B. (2008). *Australian Public Sector Adoption of EDRMS: a preliminary survey"*, Proc Conf, ACIS 2008 – 19th Australasian Conference on No. 1, pp. 37-53.

Northern Ireland Civil Service (2006). *Electronic Document and Records Management (EDRM) Lead Implementation 2nd Lessons Learned Report*.

Oliver, G. (2007). *Implementing International Standards: First Know your Organization*" *Records Management Journal. Vol.17. issue 2*

Peter Benfell, (2002). *An integrated approach to managing electronic records', Records Management Journal, Volume 12, Number 3, 95-96 Preservation and Disposal of Unpublished Information Objects in Context*. Oxford: Chandos Publishing.

Raudenbush, S. W. (2005). *"Learning from Attempts to Improve Schooling: The Contribution of Methodological Diversity"* Educational Researcher, June 1, 2005; 34(5): 25 - 31.

Records Management Journal, Vol. 15 No. 3, pp. 158-66. *records management systems software.* Canberra: NAA. http://www.naa.gov.au/

Resnik, D. (2007). *What is Ethics in Research & Why is It Important.* National Institute of Environmental Health Sciences: U.S.A.

Rogers, E.M. (2003). *Diffusion of Innovations*. New York: New Press.

Rush, M. and Vedner, G. (2008). Calming the Storm: A Risk Management model for mititgating risks. *Information Management Journal*

Ryan, D. (2005). *The future of managing electronic records"*, Records Management Journal.

Screene, L. (2005). *How prepared are public bodies for the implementation of the UK Freedom of Information Act, Records Management Journal*, Vol. 15 No. 1, pp. 34-42.

Shepherd, E. and Yeo, G. (2003). *Managing Records: A Handbook of Principles and Practice*, London: Facet Publishing.

Sprehe, J.T. (2000). *Integrating records management into information resources management in Strategies for exploiting enterprise knowledge*. Melbourne: Idea Group

Publishing Systems, Toowoomba, Queensland, December 5-7. *Systems.* Auerbach Publications: New York.

Takashorri, A. & Teddlie, C. (2003). *Handbook of Mixed Methods in Social and Behavioral Research*. London: Sage.

Taylor, D. (2008). *The Literature Review: A few tips on conducting it*. Available at www.utoronto.ca/writing/litrev.html [04.01.2014]

Thurston, A. (1997). *Records management as a public sector accountability function, US government agencies*, Government Information Quarterly, Vol. 17 No. 1, pp. 13-26. Vol. 15 No. 3, pp. 128-30.

Waldron, M. (2004). *Adopting electronic records management: European strategic Initiatives*.

Wamukoya, J. and Mutula, S. (2005). *Capacity-building requirements for e-records management: the case of East and Southern Africa*, Records Management Journal, Vol. 15 No. 2, pp. 71-9.

Wamukoya, J. and Mutula, S.M. (2005). Transparency and integrity in government: Building capacity for managing electronic records in the East and Southern African region. *Proposal submitted to the International Records Management Trust*, London, 11 January 2005.

Wilkins, L., Holt, D., Swatman, P.M.C., and Chan, E.S.K. (2007). *Implementing Information Management Strategically: an Australian EDRMS case study," in: 20th Bled eMergence: Merging and Emerging Technologies, Processes and Institutions*, Slovenia.

Wilkins, L., Swatman, P.M.C. and Holt, D. (2009). *Achieved and tangible benefits: lessons*

Williams, D. (2005). *EDRM implementation at the national weights and measures laboratory*".

World Bank. (2000). *Managing Records as the Basis for Effective Service Delivery and Public Accountability in Development: An Introduction to Core Principles for Staff of the World Bank and Its Partners:* World Bank.

APPENDIX I

Introductory Letter

University of Nairobi,
School of Library and Information Science,
P.O. BOX 30197
Nairobi,

Dear Respondent,

RE: QUESTIONNAIRE ADMINISTRATION

I am a Master's Degree student at the above named institution. I am currently carrying out a study on the **Implementation of Electronic Document and Records Management System (EDRMS) in the Ministry of Higher Education Science & Technology** and you have been picked to participate in the study. The objectives of this study are; To establish whether there is a policy framework for the implementation of EDRMS in MoHEST; To find out whether user needs (MoHEST Staff) were met by the EDRMS; To find out the opportunities that exists by using EDRMS in MoHEST; To identify the challenges facing implementation of EDRMS in MoHEST; To provide recommendations and a framework to enhance proper implementation of EDRMS in MoHEST. The findings of this study (hopefully) will enhance the implementation of EDRMS in the Kenya public sector, consequently improving the performance.

As a participant, you are required to provide answers to the items in the questionnaire attached to this letter. Please read the instructions and the questions carefully before you respond. The questionnaire comprises five (5) sections, kindly fill in your responses as honestly as possible. There is no right or wrong answers to the questions. You have nothing to fear because the information you will provide will be treated with utmost confidentiality and will not be used for any other purpose other than this study. Your participation in facilitating the study is highly appreciated.

Thank you in advance.

Yours faithfully,

Collins Juma Mutimba
Reg. No. C54/60548/2013
Contact Tel: 0721 103 950,
Email: mutimballins@gmail.com

IMPLEMENTATION OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEM IN THE PUBLIC SECTOR: A CASE STUDY OF MoHEST

QUESTIONNAIRE

SECTION A: BACKGROUND INFORMATION

1. Gender Male [ ] Female [ ]

2. What is your role at MoHEST?

a) Records Manager
b) Human Resource Manager
c) IT Manager, Office Automation
d) Department Head
e) Clerical Officer

3. Highest level of education attained. [Tick where appropriate]

a) KCSE or equivalent [ ]
b) Certificate [ ]
c) Diploma [ ]
d) Bachelor's Degree [ ]
e) Master's Degree [ ]
f) PhD degree [ ]

4. How long have you worked with MoHEST?

a) 2 years and below
b) 2 - 6 years
c) 6 - 10 years
d) 10 -14 years
e) Over 14 years

5. Have you been trained on records/archives management or studying towards, a professional records management or related qualification?

a) Yes [ ] No [ ]

6. If yes, which areas have you been trained on?

a) Creation, Capture and Receipt of Records [ ]
b) Records Life Cycle [ ]
b) Paper Records [ ]
c) Electronic Records [ ]
d) Storage and Maintenance [ ]
e) Access, Use and Tracking [ ]
f) Disposition [ ]

g) Any other (specify)_____

7. Do you use the electronic document and records management system to manage your records?

a) Yes [ ] No [ ]

8. If yes, how long have you been using the EDRMS system?

a) 1 year and below

b) 2 – 3 years

c) 4 - 5 years

d) Over 5 years

SECTION B: IMPLEMENTATION AND USER NEEDS ASSESSMENT

This section assesses as to whether user needs were addressed by EDRMS system in the Ministry of Higher Education Science & Technology. Please indicate by use of a tick [✓] in appropriate boxes.

Instructions		Not at all	To a very small extent	To a small extent	To a large extent	To a very large extent
1.	Before the introduction of the Electronic Document and Records Management System (EDRMS) in the MoHEST, were user needs analyzed?					
2	Staff at MoHEST were given a chance by the EDRMS consultants/developers to identify their needs					
3	Implementation of EDRMS was done in phases so as to give users time to assess the system					
4.	Staff at MoHEST were trained on the use of EDRMS System					
5.	All staff understand EDRMS					

	system					
6.	High quality administrative systems are in place (financial, human resources, program, strategy, etc) to support the implementation of EDRMS					
7.	Staff at MoHEST use EDRMS in their day to day operations					
8.	Staff understand the importance of the EDRMS System					
9.	The EDRMS System has helped MoHEST to achieve its objectives?					
10	How easy is it to use EDRMS (Access Record)?	a) Very Easy b) Fairly Easy	c) Easy d) Not Easy			
11.	How would you rate the convenience in using EDRMS in carrying out your departmental duties	a) Very Dissatisfied b) Dissatisfied	c)Neither d) Satisfied	e) Very Satisfied		
12.	Would you prefer EDRMS to manual system	a) Yes [ ] b) No [ ]				
13.	In general, which of the following statements best describes your opinion on EDRMS					
	I am very satisfied with the EDRMS ---------- I am more or less satisfied EDRMS ---------- I am not satisfied with EDRMS----------				1 2 3	

SECTION C: POLICY

This section establishes whether there is a policy framework for the implementation of EDRMS at the Ministry of Higher Education Science & Technology

1.	Does the MoHEST have a records management	a) Yes	b) No	c) I don't know	If No/don't know, skip to

	policy					**SECTION C**
Instructions		**Not at all**	**To a very small extent**	**To a small extent**	**To a large extent**	**To a very large extent**
2.	If yes, to what extent is the policy known by all staff in the Ministry?					
3.	Is records management policy implemented fully					
4.	Have you been sensitized on the policy?					
5.	Which areas of the policy have you been sensitized on? (*Tick more than one*)	a) Creation, Capture and Receipt of Records b) Registration, Classification and Indexing c) Storage and Maintenance d) Access, Use and Tracking of Records e) Disposition f) Acquisition and Preservation g) Legislative and Regulatory Framework h) Records Management Infrastructure i) Monitoring and Review j) Any other (please specify) _____				
SECTION D: OPPORTUNITIES						
This section assesses						
Instructions		**Not at all**	**To a very small extent**	**To a small extent**	**To a large extent**	**To a very large extent**
1.	What is the level of operationalization of EDRMS at MoHEST					
2.	EDRMS functioning is monitored /evaluated on the a regular basis of how it supports staff to delivers its services on time and efficiently to					

	recommendations made					
3.	How satisfied are you with the responsiveness of system developers to your questions and requests relating to EDRMS?					
4.	Staff satisfaction survey is carried out to identify the level of satisfaction on the use of EDRMS					

5. Which EDRMS feature (s) find MOST critical in your day to day work? (*tick all that apply*)
    a) Usability
    b) Capture
    c) Indexing and Retrieval
    d) Annotations
    e) Storage and Archiving
    f) Distribution
    g) Workflow
    h) Security

6. What accrued benefits do you see as a result of implementation of EDRMS at MoHEST?
   a) Faster Services
   b) Accountability
   c) Paperless office
   d) Minimizing duplication

SECTION F: CHALLENGES

1. What challenges do you face in the implementation of the electronic document and records management system?
   a) Financial,
   b) Human resources
   c) Technical expertise
   d) Resistance to chance
   e) Inadequate documentation

2. How are these challenges being addressed?

3. How long does it take to address identified challenges?
   a) Less than a day
   b) Two days
   c) Three to five days
   d) One week
   e) More than one week

4. Would you recommend the use of EDRMS in other government departments/ministries?

   a) Yes [ ] b) No [ ]

5. What other comments/recommendations would you make to improve the implementation and effective use of EDRMS?

   ……
   ……
   ……
   ……

Thank you very much for completing this questionnaire.

APPENDIX II - INTERVIEW SCHEDULE

SECTION I: BACKGROUND INFORMATION

Date……

Department/Unit…… Duties…….

1. Have you been trained on records/archives management or studying towards, a professional records management or related qualification?
2. If yes, which areas have you been trained on?
3. Do you use the electronic document and records management system to manage your records?
4. How long have you been using the EDRMS system?

SECTION II: IMPLEMENTATION AND USER NEEDS ASSESSMENT

5. Before the introduction of the Electronic Document and Records Management System (EDRMS) in the MoHEST, were user needs analyzed?
6. Were the staff members at MoHEST given a chance by the EDRMS consultants/developers to identify their needs?
7. Were the staff trained on the use of EDRMS System?
8. Do all staff understand how the EDRMS works?
9. Has the EDRMS System helped MoHEST to achieve its objectives?
10. How would you rate the convenience in using EDRMS in carrying out your departmental duties
11. Would you prefer EDRMS to manual system

SECTION III: POLICY

12. Does your organization have a records management policy
13. Is the policy known by all staff?
14. Is records management policy implemented?
15. Are the staff sensitized on the policy?

SECTION V: OPPORTUNITIES

16. What benefits have been realized by use of EDRMS in MoHEST?

SECTION VI: CHALLENGES

17. What challenges do you face in the implementation of the electronic document and records management system?

18. How are these challenges being addressed?

19. How long does it take to address identified challenges?

20. Would you recommend the use of EDRMS in other government departments/ministries?

21. What other comments/recommendations would you make to improve the implementation and effective use of EDRMS?