

**E-RECORDS READINESS IN CONTEXT OF E-
GOVERNMENT STRATEGY IN SWAZILAND**

BY

VUSI W. TSABEDZE

**SUBMITTED IN PARTIAL FULFILLMENT OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN LIBRARY AND INFORMATION
SCIENCE**

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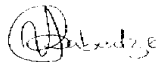
DEPARTMENT OF INFORMATION STUDIES

SUPERVISOR: PROF. TRYWELL KALUSOPA

2018

DECLARATION

I hereby declare that this thesis, "E-Records readiness in context of e-Government strategy in Swaziland" except where stated otherwise in the text, is my own work and has not been presented for the award of any degree at any other university. All the information from other sources has been acknowledged both in the text and in the references.



í í í í í í í í í í í í í í í

Signature

Vusi W. Tsabedze

Student Number: 200812687

í í í í í í í í í í í í í í ..

Date

APPROVAL

í í í í í í í í í í í í í í ...

Signature

Supervisor

Prof. Trywell Kalusopa

Department of Information Studies

University of Zululand

í í í í í í í í í í í í í í ..

Date

DEDICATION

This work is dedicated to the Almighty God for giving me the strength and courage to complete this work and to my family: my mother, my sisters and to my children Kuhle & Hlelelwe.

ACKNOWLEDGEMENTS

I would not have been able to complete this academic journey at the University of Zululand without a number of individuals who supported me along the way.

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ABSTRACT

E-records readiness is key to the implementation of electronic records management programmes and ultimately the e-Government in the public sector. However, past studies about Swaziland show no evidence of research that ascertains the depth of e-Records readiness in the context of the current e-Government strategy. Studies that have been documented on records management systems in the country have largely focused on paper-based records management in government ministries. The aim of the study was to assess e-Records readiness in the Swaziland government ministries with a view to conceptualising framework for the effective management of e-Records as a facilitating tool for e-Government.

The study sought to establish the national legal and policy framework governing management of electronic records in Swaziland's government ministries in the context of e-Government; the level of compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries; establish the e-Records management products and technologies existing in the government ministries; examine resource capacity and training for e-Records management staff; find out if there is internal awareness of the link between the e-Record management and the e-Government strategy; as well as explore the depth of the government wide digital preservation strategy.

The IRMT (2004) E-Records Readiness Tool was adapted and used as the analytical framework for this study. This tool is designed to assist organizations to benchmark themselves and to determine where they stand in respect to the management of electronic records. The study mainly used the quantitative research approach exploiting a survey that utilized a questionnaire as a data collection instrument. The quantitative approach was however complemented by a qualitative research approach which utilized observation and interview techniques. Using both quantitative and qualitative approaches made it possible to triangulate and validate the findings. The unit of analysis was the Swaziland government ministries, with a survey design involving all the 19 Government Ministries. The target study participants comprised of the Directorate of Swaziland National Archives, the Directorate of Computer Services, the Directorate of E-Government, the records officers and the action officers.

The findings reveal that the level of e-Records readiness in the government ministries is at an infant stage. There is a disjointed, haphazard and poor approach to the management of Government e-Records, poor Records Management skills and professional training of staff, weak legislative and policy framework, slow progress in the implementation of Electronic document records management system EDRMS and low capacity building as records management staff is rarely taken for training. The study also revealed that opportunities for increasing the depth of e-Records readiness exist such as: availability of financial resources for EDRMS project.

The study recommends improvement of legislative and policy framework; regular training for records management staff; and soliciting senior government officials support in records management. The study also recommends a best practice framework for management of e-Records in the context of e-Government strategy.

Keywords: Swaziland; e-Government; e-Records; e-Records management; e-Readiness; e-Records readiness; e-Records readiness assessment tool; Records management

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ACRONYMS AND ABBREVIATIONS

AGOA	:	African Growth and Opportunity Act
APA	:	American Psychology Association
CSD	:	Computer Services Department
DSS	:	Decision Support System
EDRMS	:	Electronic Document Records Management System
ECM	:	Enterprise Content Management
ILM	:	Information Lifecycle Management
ESARBICA	:	Eastern and Southern Africa Regional Branch of International Council on Archives
G2B	:	Government-to-Business
G2C	:	Government-to-Citizen
G2E	:	Government-to-Employee
ICA	:	International Council of Archives
IDM	:	Institute of Development Management
ICT	:	Information Communication Technology
IRMT	:	International Records Management Trust
ISO	:	International Standard Organisation
LAN	:	Local Area Networks
MDG	:	Millennium Development Goals
MoReq	:	Model requirements for the management of electronic records
NARMS	:	National Archives and Records Management System
NICI	:	National Information and Communication Infrastructure Policy
NRMP	:	National Records Management Policy
NERCHA	:	National Emergency Response Council on HIV/AIDS
NGO	:	Non- Governmental Organisations
OECD	:	Organisation for Economic Cooperation and Development

OLTPS	:	Online Transactional Processing System
OPP	:	Office productivity packages
OSISA	:	Open Society Initiative of Southern Africa
PS	:	Principal Secretary
PSMP	:	Public Sector Management Programme
RMA	:	Records Management Application
SADC	:	Southern African Development Community
SACU	:	Southern African Customs Union
SNA	:	Swaziland National Archives
STVA	:	Swaziland Television Authority
UNDP	:	United Nations Development Programme
US	:	Undersecretary
WAN	:	Wide Area Network
WHO	:	World Health Organisation

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

E-Government is increasingly being emphasised as a way for governments to strengthen good governance. Therefore, if implemented strategically, e-Government cannot only improve efficiency, accountability and transparency of government processes, but can also be a tool to empower citizens by enabling them to participate in the decision-making processes of governments (United Nations Development Programme- Regional Centre, 2009).

Backus (2001:33) argues that e-Government is more than just a government website on the Internet, and that it should be thought of as the 'application of electronic means in the interaction between government and citizens and government and businesses, as well as the application of electronic means in internal government operations.' In the same vein, Sheridan and Riley (2006:35) also posit that e-Government 'is a wider concept that defines and assesses the impacts technology is having on the practice and administration of governments and the relationships between public servants and the wider society, such as dealings with the elected bodies or outside groups but not for profit organisations, Non-governmental Governmental Organisations (NGOs) or private sector corporate entities'.

Based on Sheridan and Riley's (2006) definition, in this study, e-Government refers to the use of Information and Communication Technologies (ICTs) in the provision of the processes and systems that drive the on-line services offered to citizens, non-citizens and businesses by a given government.

As governments embark on e-Government, there is, however, need to pay special attention to the management of electronic records. This is so because electronic transactions carried out through e-Government applications produce e-Records whose quality and integrity need to be upheld (IRMT, 2004; Mnjama & Wamukoya, 2004). The IRMT (2004:1) thus cautions that, 'funds and effort will likely be wasted unless e-Government initiatives are supported by a solid records and information management programme.' Taking this notion into account, it can be said that e-Government can be successful if it is driven by a robust e-Records management system. The Commonwealth Secretariat (2013) argues that the major challenges facing the implementation of e-Government in Swaziland and other Sub-Saharan African

countries is the lack of a proper ICT infrastructure that support e-Records management. The Commonwealth Secretariat (2013) is of the view that among other salient factors e-Government can only be implemented successfully if it is supported by functional and readily accessible e-Records.

This chapter first introduces the field of study by defining the key terms, and secondly it gives the background and context of the study. The section that follows gives the background to the research problem by highlighting the current state of ICT infrastructure and e-Records readiness with regard to the implementation of e-Government in Swaziland; and thus underline why this study is central to the e-Government drive. An outline of chapter one is presented in figure 1.1

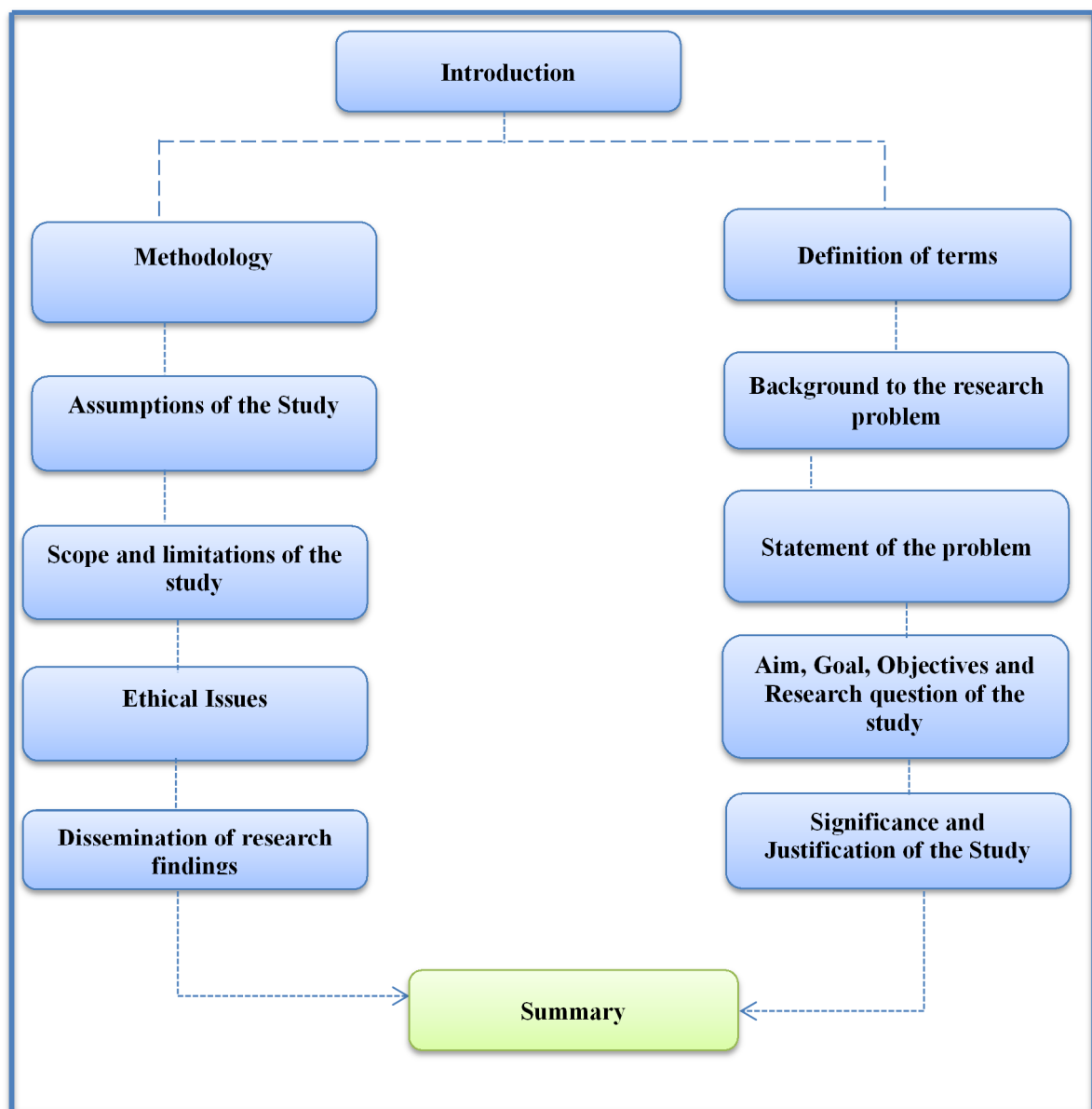


Figure 1.1: Outline of Chapter one

1.2 Definition of terms

This section defines the key terms and concepts in order to help the reader understand the research topic and the area of study. The usefulness of the study is contingent on the clarity of the key terms that it employs. Maree (2016) explains that defining terms adds precision to a scientific study and goes on to argue that the power of words comes from the combination of their meaning in any specific setting. Words carry many meanings; they are nuanced and highly context-sensitive, (Cohen, Manion and Morrison 2011). Scientific language ostensibly attempts to strip this multiplicity of meaning from words in the interest of precision while contextualizing changes in meaning that may arise. Key terms used in the study that are deemed to have specific meaning in this study are defined in the list below, in alphabetical order.

1.2.1. Archives

A review of literature shows that the concept of archives has been defined from various perspectives. According to Shepherd and Yeo (2003:5), the term archives was popularly used to refer to older papers or computer files that had been consigned to secondary storage. The authors pointed out that archives are also perceived as records kept for research purposes. However, in records management terms, archives may be defined as any records that are recognized as having long-term value. The word archive is also used to mean an institution or business unit responsible for managing records of long-term value. They are those records, which have been selected for permanent preservation due to their continuing administrative, informational, legal and historical value as evidence of the work of the creating organisations (Crockett, 2006; Ellis, 1993:1).

Archives may also include records that are no longer expected to be required for the operational use or to support accountability, but are kept indefinitely as part of the corporate memory of the organisation or for research or other cultural purposes (Shepherd and Yeo 2003:5). Walne, (1998) also defines archives as records in any medium paper based documents, pictures, film, audio tape, video recordings compact disc, digital video disc or artefacts which were compiled for the purpose of, or used during, a public or private business transaction or which were selected for preservation by the persons concerned with the transaction, or their successors or delegates, for their own later usage or future reference.

The International Council of Archives (ICA) (2007) and Rhoads (1989) agree that archives constitute the memory of nations and societies; shape their identity and are the cornerstone of

the information society. Therefore, by providing evidence of human actions and transactions, archives support administration and underline the rights of individuals, organisations and states. All these definitions are comprehensive, but ICA (2007) and Rhoadsø(1989) definition is of particular importance to this study because in this study archives are viewed as constituting the memory of nations and societies and shaping their identities since they are part of the corner stone of the information society.

1.2.2 E-Governance

E-Governance is basically the use of ICTs and the internet by managers and supervisors to execute their functions effectively. This involves internal business processes that are generally executed on the back-end of e-Government applications. E-Governance entails the use of ICTs at various levels of the government hierarchy for the purpose of enhancing the overall quality of governance (Bedi et al., 2001). The entirety of e-Governance includes the actual process of governing using ICTs. Sheridan and Riley (2006) posit that e-Governance envelops the whole concept detailing the different networks and relationships within government departments regarding the application of ICTs. E-Governance is not just about government websites and e-Mail. It is not just about service delivery over the Internet. It is not just about digital access to government information or electronic payments. E-governance allows citizens to communicate with government, and citizens to communicate with each other and to participate in the government's policy-making process (Xiong, 2006).

E-Governance in this study refers to government of Swaziland use of ICT to exchange information and services with citizens, businesses, and other arms of the government. It involves the utilisation of digital technology for interaction between the government and citizens.

1.2.3 E-Government

E-Government is also known by different terms such as electronic government, electronic governance, digital government, online government, e-Gov etc. (Wirtz & Daiser, 2017). In fact, there are many definitions for the term e-Government and the differences reflect the priorities in the government strategies. E-Government is the use of information and communication technology in the transformation of government; primarily aiming to the improvement of accessibility, effectiveness and responsibility. It is based on the diffusion of

the information and the information policy development. Electronic government guides to increasing citizens' participation and active citizens' development affecting the mechanisms of democracy (Spirakis, Spiraki and Nikolopoulos 2010, 75).

Moreover, the term e-Government, as used by the OECD e-Government Project, applies to the use of ICT as a tool to achieve better government. Therefore, e-Government is not about business as usual, but should instead focus on using ICT to transform the structures, operations and, most importantly, the culture of government. The OECD report highlights that e-Government is an important component in terms of overall reform agendas because it serves as a tool for reform; renews interest in public management reform; highlights internal consistencies; and underscores commitment to good governance objectives (OECD, 2003). World Bank, (2010) defines e-Government as the government owned or operated systems of information and communication technologies that transform relations with citizens, the private sector and/or other government agencies so as to promote citizens' empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency (Ndou, 2004).

For purposes of this study, e-Government is defined as a way for the Swaziland government ministries to use ICT to provide evidence of Swaziland government ministries business activities. E-Government allows networking capacity with speed, precision, and simplicity, which are desirable features for all government operations.

1.2.4 Electronic document (e-Document) and Electronic records (e-Records)

An electronic document is saved information in a way that requires a computer or another electronic device to visualize, interpret and process it. Electronic documents can include text, graphs or spreadsheets, e-mails and documents transmitted using electronic data exchange (IRM, 2004). Documents usually fall into one of the two subsets: a) documents that are also records, or b) documents that are not records (Kalusopa, 2011:6). ISO 15489, International Standard for Records Management, highlights the characteristics of proof and legal validity in the identification of any records.

Electronic records are information or data files that are generated electronically and stored using computer applications technology (Turek & Norbert, 2003). They are stored on various magnetic and optical storage devices and are products of computer hardware and software.

Unlike paper records, however, electronic records may be stored in various formats and on various media. For example, an electronic record may be saved as both a Word document and as a portable document format or PDF, a format that allows documents to be saved and exchanged over the Internet without alteration (IRMT 2009a:1).

Electronic records can be further described as recorded information, documents or data that provide evidence of policies, transactions and activities carried out in e-Government and e-commerce environments (IRMT 2004). According to IRMT (2009a:15) there are four common ways of creating, using and storing documents in an electronic environment: in personal computers, where individuals control the creation and use of the records; in shared computer servers, where individuals control the creation of records but share those records with others in the organisation; in shared servers with centralized control, where all individuals adhere to established procedures for creating and managing records; and in shared servers using electronic documents or records management software, where control over the creation and use of records is strongly regulated. IRMT (2009a:15) noted further that each of these approaches to creating and using electronic records can result in different methods for managing those documents, particularly for naming, filing and accessing records. With respect to the distinctive features of the electronic records, Duranti (2001:4) underlines six factors: the medium, the content, the physical and intellectual form, the function, the archival value, the legal and administrative conditions of the records.

In this study E-Records management therefore refers to the process of capturing, managing, sharing and maintaining the integrity and authenticity of records, and preserving electronic records

1.2.5E-readiness and E-records readiness

E-readiness is the capacity to create, manage, share, and use electronic records to support good governance (Lipchack & McDonald, 2003:16). Bridges (2005) posits that e-Readiness refers to a society that has the necessary physical infrastructure (high bandwidth, reliability, and affordable prices); integrated current ICTs through business (e-Commerce, local ICT sector), communities (local content, many organisations which are online, ICTs used in everyday life, ICTs taught in school), and the Government (e-Government); strong

telecommunications competition; independent regulation with a commitment to universal access; and no limits on trade or foreign investment. As put by Kalusopa (2011:7), e-Readiness is a precursor to e-Records readiness which can be defined as "the depth and breadth or the capacity of organisations to have the required institutional, legal framework, and ICT infrastructure anchored on a systematic records and information management". In this study e-Record readiness is viewed as having a proper e-Records management system that can support e-Government and improved service delivery by government ministries to the citizens. This has been discussed more in chapter three section 3.3

1.2.6 Records

Records are documents, regardless of form or medium, created or received, maintained and used by an agency, organisation (public or private) or individual in pursuance of legal obligations or in the transaction of business, of which they themselves form a part or provide evidence (IRMT, 2009). In this current study, a record is defined in line with the ISO 15489 (2016:3) which holds that a record is information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business.

1.2.1.8 Records management

Records management in the context of this study refers to the practice of creating and maintaining records by an organisation. Management of records, as an integral part of government processes, is associated with workflow, and is based on administrative and legal necessity. According to the International Organisation for Standardization (ISO) 15489-1 (2016) records management is defined as a field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records. This definition suggests that records are valuable sources of evidence and they are a cornerstone of accountability and transparent governance (Mutula and Wamukoya 2009:334). The IRMT (2009) on the other hand defined records management as the management of any information captured in reproducible form that is required for conducting business. This definition stresses the management aspect.

Therefore, an understanding of management principles helps to provide a better understanding of the records management function (Yusof, 2009). Records, therefore, need to be captured, managed and safeguarded in an organised system in order to retain their value as formal corporate records. There is need for appropriate mechanisms to ensure that the integrity of digital records is protected as reliable sources of information over time. Practising good and effective records management is particularly critical to organisations. Good quality records are needed to ensure that the right decisions and actions are taken on the mission of the organisation. Trustworthy and accessible records are authoritative sources of evidence and information that supports and sustains the credibility and accountability of any organisation, be it government or private sector (Ismail and Jamaludin, 2009:135).

1.3 Background to the research problem

This section provides the context of the study and the background to the research problem by first discussing the Kingdom of Swaziland's government ICT initiatives, the ministries concerned and lastly the challenges and issues faced in records management.

1.3.1 Swaziland e-Government strategy and challenges

The Government of Swaziland first initiated the process of having an e-Government Strategy in 2011. The government of Swaziland used the Cabinet Secretary and the Head of the Civil Service to approach the Commonwealth Secretariat to assist it with the design of such a strategy (Commonwealth Secretariat, 2013). The 2013-2017 e-Government strategy was crafted in 2013. Prior to this, the Government of Swaziland with the assistance of United Nations Development Programme (UNDP) and the Open Society Initiative of Southern Africa (OSISA) undertook a study entitled: *Electronic Government for Swaziland: Assessing the Opportunities and Challenges* in 2014.

The study highlighted generic and specific opportunities for e-Government initiatives in Swaziland such as:

- Strengthening intra-governmental communications and information sharing.
- Increasing awareness and knowledge of government intentions, policies and programmes.
- Empowering individuals and communities, providing convenient access to the government and government services.
- Improving the performance of government organisations and agencies.

- Improving government accountability and transparency.
- Presenting government as a single entity, providing multi-channel access to government and government services (Oyomno and Ramatlhape, 2004).

It was within the framework of the 2011 study that the Swazi 2013-2017 e-Government strategy was drafted. The strategy underlines that e-Government can complement Swaziland's social economic objectives in the following ways:

- All citizens of Swaziland will have the opportunity and the means to participate in the information society and the information economy irrespective of their financial, social or educational circumstances.
- The government will actively promote the creation of the information society and the information economy via the provision of transactional on-line e-/m-Government services and will with intent leverage the e-/m-Government strategy towards meeting national goals such as the MDGs.
- The government will leverage the most appropriate technologies at the right time in order to ensure that the underlying ICT solutions are not only effective but that they present the right return on investment and secure the necessary up-take to address fundamental public policy goals such as the reduction of poverty.
- The government will provide the necessary policy, institutional and regulatory framework that is required for the successful proliferation of e-/m-Government in terms of accessibility and affordability whilst at the same time ensure trust and confidence as well as security.
- The government will leverage the implementation of the e-/m-Government as an important vehicle that will allow Swaziland's economy to diversify and embrace knowledge economy based sectors.
- The government will actively pursue the achievement of digital literacy by all sectors of the population.
- The necessary measures will be taken to build up a critical mass of ICT specialists that will be required to sustain the growth of the information society and the information economy (Swaziland e-Government strategy, 2013).

The Swaziland government deemed that the e-Government strategy would:

- Act as a vehicle for social change by securing co-operation, efficiency and knowledge an efficacy towards the meeting of the MDG and therefore lead to substantive gains in poverty reduction.
- Motivate and facilitate public as well as private institutions in response to standards in education, infrastructure and service provision.
- Facilitate the cohesion of effort between government and the private sector in order to optimise resource management and integration towards sustainable growth.
- Create new economic sectors towards which investment and business ventures can be attracted.
- Support communication, openness and increase access to knowledge (Swaziland e-Government strategy, 2013).

According to the Commonwealth Secretariat (2013) the meeting of such social economic objectives for Swaziland through e-Government, however, is constrained by a number challenges. Amongst the most important is the extent to which the Internet itself can be leveraged for development. The problems that Swaziland faces with regard to the use of the internet are similar to the challenges that confront sub-Saharan Africa as a whole. The first of these challenges is that of striking a balance between technology and the need for local development. Like most African countries, Swaziland faces the challenge of bringing Internet to the rural areas. The geographical terrain and the fact that a large part of the population live in the rural areas, renders it difficult to bring broadband accessibility to every household. Internet access in Africa has been mainly limited to those who could afford expensive fixed-line services, usually limited to major urban centres. Similarly, satellite internet access has remained too costly for the vast majority (Common Wealth Secretariat, 2013).

1.3.2 Government ministries and the e-Government strategy

The e-Government strategy among other things reiterated that in order to offer an effective, efficient and transparent service that is accountable to the nation, all government ministries in the country are to embark on e-Government. Swaziland has 19 ministries that are headed by the Prime Minister. The Prime Minister's main function is to keep the Head of State (the King) informed and advised on government operations in order to provide good governance and sound leadership. The Prime Minister is assisted by the Deputy Prime Minister. The

portfolio responsibilities dedicated to the Deputy Prime Minister include: co-ordination of the Decentralization Programme; social welfare; disaster management and mitigation; gender co-ordination issues; co-ordination of children issues; and co-ordination and chairing of national social dialogues (Swaziland Establishment Register, 2009:18). The following are the ministries and their mandates.

Ministry of Foreign Affairs

The main functions of the Ministry of Foreign Affairs are to establish and maintain international relations, trade, and cooperation between the Kingdom of Swaziland and international communities.

Ministry of Home Affairs

The Ministry of Home Affairs is responsible for providing services pertaining to immigration, passports, citizenship and refugees; mainstreaming gender into all areas of national development; and promoting sporting, recreational, youth and cultural activities.

Ministry of Public Service

The Ministry of Public Service contributes towards national development by ensuring that the public service is the right size, is responsive, and meritorious; providing a framework for the development of a quality national human resource base; supporting the growth and development of a focused, vigilant and responsible information and media sector; and participating effectively on behalf of Swaziland in regional and global forums.

Ministry of Labour

The Ministry of Labour is responsible for maintaining harmonious industrial relations, a decent and safe working environment, and monitoring fair conditions of work; the compensation of insured workmen; the regulation of localization; the regulation of industrial and vocational training; and the elimination of all forms of discrimination at the workplace, in order to accomplish industrial peace and a fertile climate for investment (Swaziland Establishment Register, 2009:21).

Ministry of Economic Planning

The Ministry of Economic planning promotes sound macro-economic management that creates an enabling environment for sustainable economic growth and the efficient and cost-effective delivery of services.

Ministry of Finance

The Ministry of Finance is responsible for promoting macroeconomic stability in Swaziland by formulating and implementing fiscal and financial policies that optimize economic growth and improve the welfare of its citizens.

Ministry of Commerce and Trade

The Ministry of Commerce and Trade is responsible for the overall socio-economic development of Swaziland and for the improvement of the standard of living and quality of life of the Swazi people by creating a conducive climate for local and foreign investment and the development of industry and trade; promoting harmonious industrial relations; monitoring the efficient utilization of human resources; and ensuring that Swaziland remains an effective global economic player (Swaziland Establishment Register, 2009:25).

Ministry of Agriculture

The Ministry of Agriculture ensures household food security and increased sustainable agricultural productivity through the diversification and enhancement of commercial agricultural activities and the formation of appropriate technologies and efficient extension services while ensuring stakeholder participation and sustainable development and the management of natural resources in Swaziland.

Ministry of Education and Training

The Ministry of Education and Training provides relevant and affordable education and training opportunities for the entire populace of the Kingdom of Swaziland in order to develop all positive aspects of life for self-reliance, social and economic development, and global competitiveness (Swaziland Establishment Register, 2009:27).

Ministry of Health and Social Welfare

The Ministry of Health and Social Welfare is responsible for the improvement of the health and social welfare status of the people of Swaziland by providing preventive, promotive,

curative and rehabilitative services that are of high quality, are relevant, accessible, affordable, equitable and socially acceptable.

Ministry of Information and Communication

The Ministry of Information and Communication provides an efficient national information, communication and technology delivery framework for Swazi citizens, the public and private sectors, through converged services and applications in order to: promote government policies and programmes; preserve public records for posterity; and encourage knowledge through universal access to information and well-developed, efficient, and affordable communication facilities (Swaziland Establishment Register, 2009:29).

Ministry of Justice and Constitutional Affairs

The Ministry of Justice and Constitutional Affairs facilitates the administration of Justice through the various court structures (Judiciary), the provision of legal services to Government, registration and protection of intellectual property rights, real rights, companies and associations, prevention of corruption, management of elections, administration of deceased and insolvent estates, the liquidation of companies and rehabilitation of offenders.

Ministry of Natural Resources and Energy

The Ministry of Natural Resources and Energy's mission is to ensure the optimal development, use and management of the country's natural resources (water, minerals, energy, land) in a sustainable manner, with minimal damage to the environment. Furthermore, it provides efficient services on surveying, mapping, and the valuation of resources for the social and economic development of Swaziland (Swaziland Establishment Register, 2009:33).

Ministry of Tourism and Environmental Affairs

The Ministry of Tourism and Environmental Affairs ensures sustainable and equitable development through the promotion of sound environmental principles, conservation of the national heritage in order for the country to be conducive to Swazis and attractive to international visitors, and to ensure efficient and effective custody of all recorded information.

Ministry of Sport, Culture and Youth Affairs

The Ministry of Sport, Culture and Youth Affairs promotes the development of sports, arts and culture, and youth through popular participation and the creation of an enabling environment for a coordinated and structured framework to address socio-economic challenges by 2022 (Swaziland Establishment Register, 2009:35).

Ministry of Housing and Urban Development

The Ministry of Housing and Urban Development facilitates the delivery of housing and urban services through appropriate physical planning, strengthening the institutional capacity of urban local authorities, and the protection of life and property from the risk and impact of fire and other emergency situations.

Ministry of Tinkhundla Administration & Development

The Ministry of Tinkhundla Administration and Development was established in 2009. The objective of the current institutional arrangement is to maximize coordination and efficient use of resources in regions and Tinkhundla. The portfolio responsibilities of the Ministry of Tinkhundla Administration and Development are: tinkhundla administration; regional development planning and co-ordination; decentralization; national physical planning and community development (Swaziland Establishment Register, 2009).

Ministry of Public Works

The Ministry of Public Works ensures the provision and maintenance of sustainable public infrastructure, an efficient, effective and seamless transport system and network, regulation of a vibrant construction and transport industry, management of public service accommodation, and the provision of meteorological services.

Though all the government Ministries described above are in the process of implementing the e-Government project in order to improve accountability and service delivery to the nation, there is evidence in the e-Government strategy 2013-2017 that suggests that all of them lack e-Records readiness for the implementation of such a project.

Electronic Records Management is a key technology that supports e-Government. Records management is an important part of the infrastructure that makes e-Government work. Research has shown that good records management strengthens e-Government services by

supporting business continuity, security and risk management, legal compliance and accountability, evidence-based decision-making and transparency, good governance and public trust, good performance and government capacity building.

1.3.3 Swaziland National Archives and e-Records

The Swaziland National Archives (2015) argue that lack of investment on ICT infrastructure and the absence of a robust ICT policy that aligns e-Records management and e-Government is caused by the use of an obsolete Records and Archives Act of 1971. The department feels that this Act no longer addresses current issues in as far as the management of records and archives is concerned, although it is the one that is used as a manual of operation even though it does not have any blueprint on e-Records management. In Swaziland, the Department of Records and Archives Management is the one that is mandated to manage records and to liaise with the Ministry of ICT in the implementation of e-Government in government ministries. According to the progress report entitled *“The state of e-Records in government ministries in Swaziland”* which was released by the Records and Archives department in April 2015, there is evidence that the state of e-Records in government ministries in Swaziland is not impressive.

The Swaziland National Archives Report (2015), points out that there is no co-ordinated e-Records policy or strategy at government level that cuts across and integrates e-Records management in all ministries. The absence of such an infrastructure has resulted in ministries individually engaging consultancies in order to implement documents management systems. According to the Report (Swaziland National Archives Report, 2015) this did not help matters in as far as e-Records management is concerned, because it went as far as enabling ministries to have incomplete and incoherent individualised records management systems that are not coordinated. If e-Records management is not coordinated in government ministries one becomes interested in exploring in depth how a disintegrated e-Records system would support e-Government endeavours.

The Swaziland National Archives reports further assert that due to the lack of a coordinated effort in managing e-Records, ministries have become comfortable with working in silos as they try to establish and implement their own systems. The Report notes that only a few ministries have tried to implement their local systems while the majority of ministries do not

have any systems of e-Records management in place. The ministries that have tried are the Ministry of Natural Resources, Department of Geology and Mines, the Ministry of Justice department of Deeds, Judiciary, Correctional Services as well as the Prime Minister's Office. Even if this is the case, the report attests that these systems that have been set in these ministries are not working, because they do not have an e-Records management support system and trained IT personnel.

Due to the lack of functional e-Records management systems in government ministries, the Swaziland National Archives Report (2015) noted that individual civil servants create e-Records and keep them in different formats and backup using external drives. This was noted as a concern because individuals retire or resign without proper hand-over or take-over. In such cases, retrieval of such documents stored as individual computers in different external drives tends to be a challenge. Therefore, keeping records in such formats is risky. This scenario was also noted by Tsabedze (2011) who accentuates that, each office that created electronic records had its own way of maintaining, retrieving, and storing electronic records. In some offices, memory sticks were found lying on top of tables without protective lids and storage boxes to minimize their exposure to dust. There was no documentation of records in electronic format, which makes them inaccessible to other officers.

1.3. 4 E-Records readiness assessment within e-Government

E-Government cannot be discussed out of the context of ICT and e-Records management. In that regard, for the implementation of any e-Government strategy to occur, there is need for thorough assessment of the capacity in terms of legislative and policy framework, human resources and ICT infrastructure in order to ascertain if public organizations are e-Records ready. The importance of e-Records readiness assessment in e-Government is that it helps organizations be aware of the existing gaps, risks, and opportunities in the records management systems in current use. The recommendations coming from the assessment form a basis for planning in terms of infrastructure, human resources, legal framework in view of the transition to an e-environment (IRMT, 2004; McLeod, Childs & Heaford, 2006). In that regard, Kalusopa (2011:8), has aptly argued that, "e-Records readiness assessments are meant to guide development efforts by providing benchmarks for comparison and gauging progress in organizations in understanding the depth of e-Records management."

Government records are a public resource; hence all citizens have the right to their merited access to engender values of accountability, transparency and good governance. The effects of not effectively managing e-Records can be far reaching and would necessarily imply that records may not be made available if and when needed (Mutula & Moloji, 2007). In the same vein, Wamukoya & Mutula (2005) note that the chronic weaknesses in Government record keeping can adversely affect private sector investment and contribute to the lowering of the general standard of service offered to business. It may also be argued that unless these records that constitute a national resource are properly managed, some invaluable information may be lost forever.

Documented studies on e-Records management in the developing and the developed world reveal notable challenges that negatively impact on e-Records management practices. For example, studies conducted by Millar (2004), Wamukoya & Mutula (2005) and Nengomasha (2011) in East and Southern Africa highlight the following impediments to e-Readiness.

- Lack of or deficient legislation, policy frameworks and procedures to guide the management of e-Records.
- Lack of understanding of what records are and the importance of records management.
- Lack of adequate training and education in information technology systems and electronic records management approaches.
- Poor security, confidentiality control mechanisms, records backup and recovery systems.
- Low status accorded to e-Records management personnel and their roles in fostering organizational efficiency and accountability.
- Inadequate budgets allocated to records management operations.
- Lack of mechanisms for record creation, update, retention, migration and disposal.
- Absence of a records management disaster plan including digital preservation strategy.

Wamukoya and Mutula (2005) posit that accurate and reliable records management is needed to provide a strong foundation for all e-Records management development strategies. A well-managed e-Records management system is considered crucial today in providing a strong foundation for enhancing accountability, transparency, democratic governance, poverty

eradication and elimination of corruption and efficient use of public resources (IRMT 2003). In Swaziland, although the 2013-2017 Swazi e-Government strategy is emphasized as a vehicle for national economic and social development by ensuring effectiveness, efficiency, transparency and accountability on the part of the government, it does not highlight whether the government ministries in Swaziland are e-Records ready for purposes of the implementation of e-Government. For example, it is still problematic to access e-Records in rural areas or any other place where there is no technology and electricity. Sheridan and Riley (2006) argue that trying to introduce e-Government when there is no e-Records readiness is as good as wasting money and other valuable resources. Nengomasha (2009) also affirms that when the government embarks on e-Government there tend to be an increase in the use of electronic records as well as an increase in government's reliance on electronic information. In light of the background given above, the study investigated and made an assessment of e-Records readiness in light of the e-Government strategy in Swaziland.

1.4 Statement of the problem

The overarching problem that instigated this study is that while there is abundant evidence of the Swaziland government's undoubted ICT platforms that provide accurate and faster communication through the use of e-applications to access government services, the status of e-Record readiness of this implementation has not been fully ascertained. Several authorities on records management such as IRMT (2004; 2009) underscore the fact that though e-Government services produce e-Records that document government transactions and online activities, their extent of the application records management functionalities remain in contention.

The Swaziland ICT legislative and policy framework of 2007 allows for the establishment of the e-Government portal that should provide ubiquitous access and sharing of information through internet among government departments; yet there has been several instances where records captured and stored in the e-Records system have been lost or could not be accessed by the user community (Times of Swaziland, 2010). This implies that the drive in the implementation of the national e-Government strategy is fraught, among other issues, with e-Records management challenges of admissibility, authenticity and reliability which are a cornerstone for evidence in the administration of the state and general governance of the country (Tsabedze, 2011).

Studies elsewhere in Africa such as the IRMT (2003), Wamukoya and Mutula (2005); Moloji (2006); Nengomasha (2009) and Kalusopa (2011) all contend and underscore the need for a thorough e-Records readiness as key to the implementation of e-Records management programmes and ultimately e-Government in the public sector. However, past studies in Swaziland show no research evidence that ascertain the depth of e-Records readiness in the context of the current e-Government strategy. Studies that have been documented on records management systems in the country have largely focused on paper-based records management in government ministries, such as one conducted by Tsabedze (2011). Specifically on e-Records, the study by Ginindza (2008) attempted to study the general state of e-Government in Swaziland in government ministries and departments. Others such as Maseko (2010) examined the management of audio-visual records at the Swaziland Television Authority (STVA). The Swaziland National Archives Report (2015) also have noted that the lack of comprehensive studies in Swaziland on e-Records management has prejudiced the department and its partners in the Ministry of Information Technology that would be a blueprint that can guide the implementation of the e-Records project. This has resulted in government ministries adopting an uncoordinated approach in managing e-Records owing to the fact that both the ICT Policy and e-Government 2013-2017 strategy are silent on how e-Records management is supposed to be implemented in the face of the e-Government drive. In the same vein, the Records and Archives Act of 1971 is also obsolete and therefore inadequate to address the issues of e-records management in the current digital era. There is currently a paucity of empirical studies which address e-Records readiness with respect to e-Government, in the context of a developing country such as the Kingdom of Swaziland.

For these reasons it is therefore imperative to study and assess e-Records readiness in the context of e-Government strategy. This current study will therefore contribute towards bridging that gap. The outcome of this study which is a framework on e-Records readiness in the context of implementing e-Government will assist Swaziland government to accurately establish, articulate and prioritize e-Records and information management in the current dynamic digital age.

1.5 Aim, Goal, Objectives and Research question of the study

1.5.1 Aim and goal of the study

The aim of the study was to assess e-Records readiness in the Swaziland government ministries with a view to conceptualising framework for the effective management of e-Records as a facilitating tool for e-Government.

1.5.2 Objectives of the study

In order to achieve the goal of the study, the following were the objectives:

1. To establish the national legal and policy framework governing management of electronic records in government ministries in Swaziland in the context of e-Government.
2. To ascertain the level of compliance to policies, standards, tools, procedures and responsibilities for e-records management in the government ministries.
3. To establish the e-Records management products and technologies existing in the government ministries.
4. To examine resource capacity and training for e-Records management staff in the government ministries.
5. To find out if there is internal awareness of link of e-Record management with e-Government strategy in the government ministries in Swaziland.
6. To establish the depth of government wide digital preservation strategy in the government ministries.
7. To conceptualise a framework that may inform the appropriate management of e-Records in the context of Swaziland's e-Government.

1.5.3 Research questions

1. What is the national legal and policy framework governing management of electronic records in government ministries in Swaziland in context of e-Government?
2. Is there any compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries?
3. What e-Records management products and technologies exist in the government ministries in Swaziland?
4. Is there resource capacity and training for e-Records management staff in the government ministries?

5. Is there any internal awareness of a link between e-Record management with e-Government strategy in the government ministries?
6. What is the depth of government wide digital preservation strategy in the government ministries?
7. How can e-Records be managed appropriately in the context of e-Government?

1.6 Significance and justification of the study

This study contributes practically and theoretically to the body of knowledge on records management and informs decision making regarding e-Records and e-Government in Swaziland and beyond. According to Creswell (2003:149), the significance of a study elaborates on the importance and implications of a study for researchers, practitioners and policy makers. He argues that the significance of a study should centre on how the study adds to scholarly research and literature in the field, how it can help improve practice and why it can improve policy.

This study is made important by the fact that the 2013-2017 Swaziland e-Government strategy does not consider a relationship between e-Records readiness and e-Government. The study elucidates in detail, the essence of factoring in e-Records readiness when implementing the national e-Government strategy. This study may inform policy makers, especially those in the Government ministries and the cabinet, on the essence of harmonizing the national e-Government strategy and e-Records readiness. The study also reveals that e-Government strategy should not exist in isolation but it should be supported by or embedded in a robust national ICT policy. The study also reveals how, without the rural electrification programme, it would be a futile endeavor to try to implement e-Government strategy in rural areas where there is no electricity and access to the internet.

Theoretically, this study is deemed significant because it has a potential of stimulating debate and research on how best e-Government strategies should be crafted as well as how e-Records readiness could be utilized in the implementation of e-Government strategy. Further research can also be elicited by this study in areas such as how an ICT policy can harness e-Records readiness culminating in the crafting and implementation of the e-Records strategy. This study also can motivate academics to research further and add on the body of knowledge on topics such as, the co-relation between e-Records readiness and e-Government strategy.

1.7 Methodology

This study assesses the e-Records readiness in the context of e-Government strategy in Swaziland. To a large extent, the study uses the quantitative approach. In addition, the study also, exploits the survey approach that utilized questionnaires as data collection instruments. The quantitative approach was however complemented by a qualitative approach which utilized observation and interview strategies. Using both quantitative and qualitative approaches made it possible to triangulate and validate findings. The use of triangulation is encouraged in empirical studies. Several writers (for example, Odera 2003; Creswell, 1994; Denzin, 1978; Patton, 2002; Yin, 2003) support the use of triangulation. By using a variety of sources and resources, the evaluator and observer can build on the strengths of each type of data collection, while minimising the weaknesses of a single approach (Patton, 2002).

The study population consists of Swaziland government ministries. The selection of respondents within the Ministries was based on purposive and accidental sampling. Purposive sampling relies on good judgment to handpick participants who will satisfy the needs of the research (Hoyle et al., 2002: 187). Accidental sampling refers to "taking the cases at hand" (Hoyle et al., 2002: 186), in other words making do with those cases that are available. In this study, no sampling was done and all the 20 government ministries constituted the target population.

The study ensured reliability and validity through triangulation, as well as piloting, which led to revision and refinement of research instruments to make sure that respondents understood the questions as intended by the researcher. Quantitative data was analysed using (STATA), while qualitative data was categorised and thematically analysed to complement and illuminate the findings. A detailed discussion of the research methodology is presented in Chapter 4.

1.8 Assumptions of the study

Leedy and Ormrod (2001:62) stress that assumptions are core to any research, "...without them, the research problem itself could not exist." The authors stipulate that researchers should spell out what they take for granted to prevent misunderstanding. Hence, "all assumptions that have a material bearing on the problem should be openly and unreservedly

set forth" (Leedy and Ormrod 2001:62). In so doing, assumptions enable others to make a critical evaluation of the conclusions that result from the research.

The study is based on the assumption that the government of Swaziland has embarked on e-Government, followed protocols for e-Governance that have clearly defined guidelines for creating and managing e-Records systems efficiently. This would result in an increase of e-Records and a corresponding increase in government's reliance on electronic information. In this way government ministries service delivery is enhanced as consumers can access services fast, easily, anytime, and cost effectively from anywhere online. For this reason, it was important to analyze the status of e-records management in government ministries so that recommendations may be made on how to improve or strengthen e-Records management so as to enhance e-Government and service delivery.

1.9 Scope and limitation of the study

The study was confined to the assessment of e-Records readiness in government ministries in Swaziland. For this research, all the 19 ministries were selected. Although the ministries under study have decentralized their services to the regions, the current study is only based in Mbabane, the capital city of Swaziland. However, it is expected that the results of the study will positively influence e-Recordkeeping practices in the regions as well. Another scope of this study was that it concentrates on government ministries leaving out the private sector where, according to the Department of Records and Archives (2015), there is lack of a comprehensive study on records management. Future research could look into this area to establish how the public and private sectors can collaborate to strengthen e-Records management with a view of developing an e-Records framework for service delivery.

Four limitations have been demonstrated in this study. The first was the challenge of accessing the respondents, especially access to the senior government officials of the ministries, mainly because of their busy schedules. The second limitation comes from self-reported data. Since some of the data were collected through face to face interviews with Director of Swaziland National Archives, Director of Department of Computer Services and Director of e-Government Department, some of the data could not be verified reliably independently. The third limitation was on lack of previous research on e-Records readiness in government ministries in Swaziland which required the researcher to do more. The fourth limitation was on the literature review. The literature review was written only in English,

around the world. The study did not intend to consult literature in other languages other than english.

1.10 Ethical issues

The researcher considered ethical consideration issues in the research as stipulated in the University of Zululand research conduct guidelines. Consent was obtained from the Director of Swaziland National Archives (SNA) as well as the individual participants. The researcher also informed the Ministries well about the study, and operated within the parameters agreed with the Ministries. However, the researcher heeded the caution by Hoyle et al., (2002) that giving too much information about the study to the respondents may lead to bias in the responses. They also advise against coercing respondents into participating in the research. Participation in the study was purely voluntary. The letter from the Director of Swaziland National Archives (SNA) granting permission to conduct research in government ministries was produced when these ministries were visited to collect data. The researcher explained to the head of ministries and participants the purpose and benefits of the study. All participants signed the consent form with ethical guidelines and considerations. Participants were told from the beginning that participation in the study was voluntary, and that they could withdraw from the study at any time if they felt like without any victimization. The way the data collection exercise was going to proceed as well as the duration of participation was made known to the participants through giving them a detailed schedule that showed what they were expected to do, where, when and for how long. To ensure participants protection questions that were likely to cause psychological discomfort to them were avoided. The names of participants were not disclosed in order to protect their identity. In order to ensure that strict confidentiality principles were adhered to, pseudo names were used instead of real names of participants.

1.11 Dissemination of research findings

The findings of this study will be disseminated as follows:

- Through a printed form of the thesis stored in the Uni-Zulu collection section of the library in the University of Zululand
- Publication of this thesis online
- Presentation of the findings at conferences, and in seminars and workshops
- In peer reviewed journals.

1.12 Summary

This chapter gave the background and an introduction of the thesis. It began by articulating what e-Government is all about noting that the government needs to pay attention to e-Records once it has decided to embark on e-Government. The chapter then gave the background of the study and its conceptual framework. The chapter provided short descriptions of all the 19 government ministries that are participants to e-Government. The statement of the problem, aim, goal, objectives, research questions, methodology, as well as the significance and justification of the study were well documented in this chapter. The chapter highlighted the scope, delimitations, ethical issues and dissemination of research findings. It was also revealed through literature review in this chapter that the e-Government strategy of the government of Swaziland does not incorporate ICT and e-Records readiness. In light of the literature reviewed, this chapter showed that an e-Government strategy cannot be crafted and implemented in isolation of a robust ICT framework and e-Records readiness. The rest of the thesis is outlined as follows:

Chapter 2: Location and context of the study

Chapter two contextualizes and conceptualizes the study by providing background information on the state of e-Records management in developing countries, the sub-Saharan countries, Southern Africa and Swaziland in particular where the study was conducted. The current state of the e-Records management environment, in particular the current government e-Records management programmes are focused on.

Chapter 3: Literature review and theoretical framework of the study

Chapter three presents a theoretical or conceptual review of the key contending theories and models relevant to the current study. The chapter also reviews literature related to e-Government and electronic records, State of e-Records management in Swaziland and the nexus of e-readiness, e-record readiness and e-Government. Further, a discourse on the review of related and empirical literature on the dynamics and status of the management of e-Records in selected parts of the world, ESARBICA and Swaziland was presented. E-readiness assessment models in general and e-Records readiness assessment models/tools in particular and their relevance to this study are critically reviewed and discussed.

Chapter 4: Research methodology

Chapter four presents the research design and methodology of the study. The issues discussed include the use of survey research, the study population and justification, data collection instruments, the validity and reliability of instruments and data collection procedures. Other issues addressed in the chapter are problems encountered during data collection, the processing and analysis of data, ethical considerations and an evaluation of the research methodology.

Chapter 5: Data analysis and presentation of results

Chapter five presents research findings on the state of e-Records management in government ministries in Swaziland. Empirical results are presented in the form of figures, tables and narrations.

Chapter 6: Interpretation and discussion of research findings

Chapter six interprets and discusses the findings presented in chapter five and addresses how the findings help the researcher to answer the research questions. The e-Records management system as guided by the e-Governance strategies for the e-Records keeping requirements, theoretical framework, legislation and policies, skills and training procedures are discussed.

Chapter 7: Summary of findings, conclusions and recommendations

Chapter seven summarizes the interpreted study findings and proposes recommendations in the form of a framework for management of electronic records in the context of e-Government strategy in Swaziland. Finally, the chapter speculates on future research that might emanate from extending this study.

CHAPTER TWO

LOCATION AND CONTEXT OF THE STUDY

2.1 Introduction

The previous chapter set the scene by providing the background and an introduction of the thesis. This chapter discusses the location and context of the study. It first describes the political history and socio- economic conditions of Swaziland, the study location. It then gives an overview of the records and archives management legislative environment in Swaziland and its effects on records management and access to information and records. The chapter also provides an overview of the status of the information communication technology (ICT) infrastructure in Swaziland as outlined in figure 2.1.

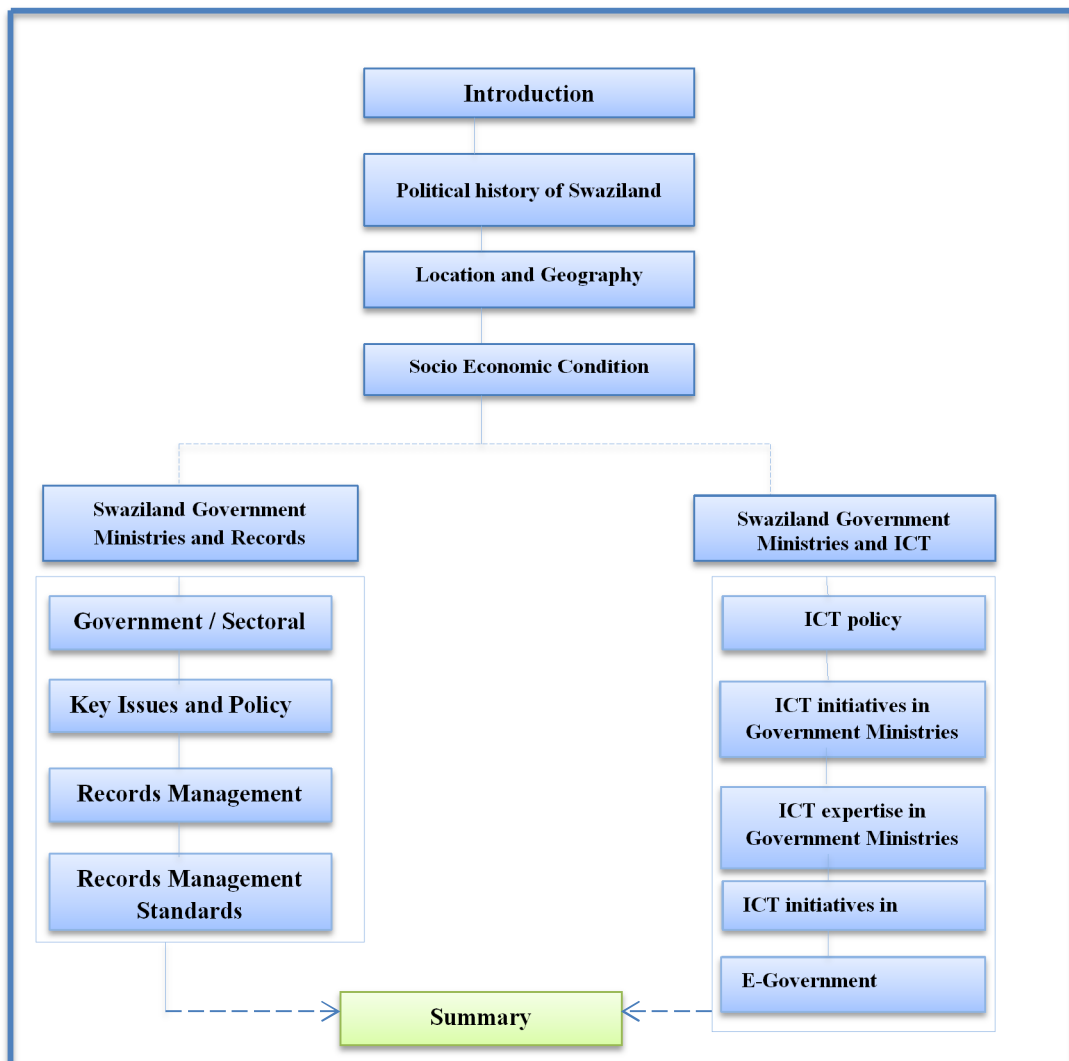


Figure 2.1: Outline of Chapter two

2.2 Location and geography

Swaziland is a small landlocked country in the southern part of Africa that shares borders with South Africa in the North, West and South and Mozambique in the East. (See figure 2.2). It has a total land area of 17, 363 km² and a common border of 535 km with South Africa and Mozambique.

Swaziland has a relatively mountainous relief with the following elevation extremes; the highest point is Emlembe which is 1 862meters above sea level and the lowest point is the Great Usuthu River which is 21 meters above sea level. Politically the country is divided into four administrative divisions; Hhohho, Lubombo, Manzini and Shiselweni. The capital and administrative city of Swaziland is Mbabane with a population of 76218. The second largest town is Manzini with the population of 110537 (D.H.S, 2017).



Figure 2.2: The location of Swaziland on the map of Southern Africa

Source: Extracted from www.worldatlas.com (2017)

2.3 Political history of Swaziland

On 26 July 2005 King Mswati III ratified Swaziland's first constitution in over 30 years. It went into effect February 8, 2006; a 1973 proclamation that had banned political parties lapsed at that time. While the current constitution does not prohibit the existence of political parties, parties are not allowed to contest elections (US Department of State, 2011).

According to Swazi law and custom, the monarch holds supreme executive, legislative, and judicial powers. In practice, however, the monarch's power is delegated through a dualistic system--modern, statutory bodies like the cabinet, and the traditional governing structures of the tinkhundla system. The King must approve legislation passed by parliament before it becomes law. The prime minister, who is the Head of government, and the cabinet, which is recommended by the prime minister and approved by the King, exercise executive authority (Simelane, 2003).

At present, parliament consists of two houses, the House of Assembly members and the House of Senate members. For local administration Swaziland is divided into four regions, each with an administrator appointed by the King. Parallel to the government structure is the traditional system consisting of the king and his advisers, traditional courts, fifty five (55) tinkhundla (sub-regional districts in which traditional chiefs are grouped), and approximately three hundred and sixty 360 chiefdoms (Matsebula, 1976).

According to the statistics released on the Internet World Stats website (2017) Swaziland's total population stood at 1,322,917 in 2017. The unemployment rate is 22.8 percent and the literacy rate stands at 81.6 percent in the Kingdom (UNICEF statistics, 2016).

According to the Constitution of the Kingdom of Swaziland (2005) the system of government is a Tinkhundla-based system which emphasises devolution of state power from central government to Tinkhundla areas and individual merit as a base for election or appointment to public office. The Tinkhundla system is the system of government since Swaziland is a democratic country, which emphasizes devolution of state power from central government. The system is non-partisan since the constitution does not recognize political parties; although section 25 of the constitution allows for open freedom of assembly and association. The Tinkhundla units or areas, inspired by a policy of decentralization of state power, are the engines of development and the central pillars underpinning the political organisation and economic infrastructure of the country through which social services to the different parts of the Swazi community are facilitated and delivered.

2.4 Social economic conditions in Swaziland

Swaziland ranks as a lower middle income country, but it is estimated that 69% of the population lives in poverty. Most of the high-level economic activity is in the hands of non-Africans, but ethnic Swazis are becoming more active with small entrepreneurs slowly moving into middle management positions. Although more than 70% of Swazis live in rural areas, nearly every homestead has a wage earner (World Bank report, 2017).

The past several years have seen wavering economic growth as the small economy is strongly affected by climactic conditions and external factors. In 2010, the kingdom was plunged into a fiscal crisis when changes were made to the Southern African Customs Union revenue-sharing formula, which saw the Kingdom losing more than half of its income. This together with the mismanagement of public funds and overspending led to a near collapse of public finances and caused the government to use its foreign-exchange reserves and to seek external financing. (World Bank report, 2017)

Nearly 60% of Swazi territory is held by the Crown in trust of the Swazi nation. The balance is privately owned, much of it by foreigners. The question of land use and ownership remains a very sensitive one. For Swazis living on rural homesteads, the principal occupation is either subsistence farming or livestock herding. Culturally, cattle are important symbols of wealth and status, but they are increasingly used for milk, meat, and profit. Overgrazing, soil depletion, drought, and floods are persistent problems (UNDAF, 2011).

The sugar industry, based solely on irrigated cane, is Swaziland's leading export earner and private-sector employer. Soft drink concentrate (a U.S. investment) is another large export earner, followed by wood pulp and lumber from cultivated pine forests. Pineapple and citrus fruit are other important agricultural exports (Forster, 2000).

Swaziland mines coal and diamonds for export. There is also a quarry industry for domestic consumption. In 2010, mining contributed to about 1.8% of Swaziland's GDP, and predictions for the industry are mixed as coal mining is expected to increase but quarried stone production is expected to decrease.

Swaziland became eligible for the African Growth and Opportunity Act (AGOA) in 2000 and qualified for the apparel provision in 2001. AGOA created over 30,000 jobs, mostly for

women, in Swaziland's apparel industry. However, the industry suffered in 2005-2006, due to both increased global competition as a result of the end of the Agreement on Textiles and Clothing (ATC) on 1st January 2005, and the strong Rand (Swaziland's currency is linked to the South African Rand at par), which reduced exports. There are an estimated 16,000 people employed in the apparel industry (UNDAF, 2011).

Swaziland is also a member of the Southern African Customs Union (SACU), with which the U.S. began negotiating a free trade agreement in May 2003. The other members of SACU are Botswana, Namibia, Lesotho, and South Africa.

2.5 Swaziland government ministries and the records management infrastructure

Records management in the government ministries in Swaziland is undertaken within the framework of the Swaziland National Archives Act. Swaziland National Archives was established by Archives Act no.5 in 1971. Its mission is to enable Swazi citizens to fully participate in their country's social, political and economic life through the equitable development, preservation and protection of Swazi cultural heritage. The Swaziland National Archives has a mandate for records management in government and public sector organizations. This mandate includes:

- Managing public records and ensuring their preservation as historical records
- Advising public offices on proper records management practices (Tsabedze, 2011).

Government Ministries in Swaziland receive advisory services on the storage and preservation of their archival materials from Swaziland National Archives as stipulated by the Act. The Act empowers the director of Swaziland National Archives to examine and advice on the care, preservation, custody and control of any public records. The Act further empowers the director, at his or her discretion, to approve any institution, whether private or otherwise, as a place wherein may be deposited, housed or preserved, either permanently or temporarily, any public archives or records that have been declared public records (Tsabedze, 2011).

The National Archives Department occupies a key position in Swaziland's records management and information network as the legal custodian for public, non-public and private published or unpublished documentation regardless of media relating to Swaziland.

The Department had all along been an end player in the management of records serving only as a recipient of closed records. However, owing to recent developments and in compliance with international standards in Archives and Records Management and alignment of Government Ministries in 2008, the Swaziland National Archives has assumed total control of the records management lifecycle. The Swaziland National Archives is, therefore, mandated to ensure the overall management of the lifecycle of the record, i.e. from planning of records management systems, creation, maintenance up to the disposition stage, where ephemeral records are destroyed and records of enduring value are transferred to archival custody for permanent preservation and public access (SNA Report, 2015).

The Swaziland National Archives, in accordance with government's development initiatives through Millennium Development Goals (MDGs), Decentralization Policy, Poverty Reduction Strategy and Action Plan (PRSAP) and the National Information and Communication Infrastructure Policy (NICI), is in the process of implementing programmes that address some of the country's key development strategies.

For instance, records regarding the strategic expenditure of government in line with the PRSAP should be made readily available and accessible. This will assist in government's economic forecasting and planning as well as government's public accountability. Similarly, information on the ministry of Health can be made available in Records Centres in the four administrative regions of the country and will be accessible to the creators and be extended to the general public on special arrangements (Swaziland National Archives Policy).

The Swaziland National Archives (SNA) supports the basic principles of good governance through promoting the effective management of government records. These records will facilitate the efforts made by government in building consensus, accountability, transparency, responsiveness, effectiveness and efficiency, equitability, inclusiveness and strict adherence to the rule of law. Such a situation ensures that service delivery is efficient, corruption is minimized and every citizen participates in decision making and citizenship rights are protected (SNA Report, 2015).

2.5.2 Key issues and policy statements

The Archives Act 5 of 1971 and Legal Notice No. 25 of 2009 that places the National Archives under the Ministry of Information, Communications and Technology (as set out in

Gazette No. 15 of 2009) and the circular memorandum of march 2010 that mandates the National Archives to oversee the records management function across government ministries and departments. This is due to the fact that records management professional expertise is vested within the National Archives department.

If the situation is left unattended, records management practices in government ministries and departments will deteriorate even further, at a huge cost to government.

The following are the main strategic issues and policy statements addressed by the policy (Swaziland National Archives Policy, 2008).

2.5.3 Records management

Records as corporate assets are important sources of administrative, fiscal, legal, evidential and historical information. Records are vital to government and private sector organisations for current and future operations for the purposes of transparency and accountability. Records constitute the corporate memory of an organization. This National Records Management Policy (NRMP) is, therefore, aimed at regulating the planning, creation, use, maintenance, disposal and retention of records in accordance with all statutory requirements and international Records Management best practice standards (SNA Policy, 2008).

2.5.4 Records management standards

The National Records Management Policy promotes compliance to International Records Management Standards (ISO 15489) for government ministries and departments including the private sector. Government ministries and departments perform their functions in an effective, efficient manner. Well managed active and semi-active records ensure the orderly conduct of organisational business; ease access and timely retrieval of records and consistent delivery of Government services to the public (SNA Policy, 2008).

2.6 Swaziland government ministries and ICT application portfolios

2.6.1 ICT policy

The Prime Minister of Swaziland launched an ICT policy for the country on the 29th March, 2008. During the launch of the policy the Prime Minister publicly endorsed the ICT policy.

The policy objective is to enhance national socio-economic development by encouraging the beneficial activities of ICT in all sectors through the provision of a conducive environment

that will progressively maximize the quality and security of the life of the people of Swaziland and make the best use of the country's human and natural resources, and promote multi-layered co-operation and knowledge sharing nationally, regionally and globally (Swaziland Government, 2008).

Among the specific objectives of the ICT policy is the fact that the policy shall ensure that all sectoral development plans and projects have an ICT component and to coordinate ICT activities in the country including the formulation of appropriate policies, strategies and plans for the implementation of e-applications for example, e-Government, e-Governance, e-Health, and e-Commerce.

The strategies to achieve the objectives of the ICT policy as reflected in the ICT policy document include building broadband capacity in the information and communications infrastructure, introducing new services to improve universal access and service quality, and promoting the deployment and exploitation of information, knowledge and technology within the economy and society in order to address issues related to equitable access to education and training. The ICT policy for the country has incorporated recommendations that were made by Oyomno and Ramatlhape (2004:1). According to Oyomno and Ramatlhape (2004:1) the country was to develop a national ICT policy that would guide the development of the requisite applications such as infrastructure, institutional arrangements, and human capital that would support ICT applications to assist in national development needs, priorities and strategies.

2.6.2 ICT initiatives in government ministries

Oyomno and Ramatlhape (2004:15) noted that the government network component of the ICT infrastructure comprises of a wide area network (WAN) that spans the country, local area networks (LANs) located mainly in ministries and departments, and a limited but rapidly growing Internet service. Oyomno and Ramatlhape (2004: 16) observed a limited use of the full capacity of the government WAN and that ICT access and penetration in the Kingdom are very limited.

The main initiatives include:

- Expansion of the government network infrastructure to link all regional/sub regional offices, Police Stations, Correctional Services and Border Posts to the central

computing facilities. This will result in the decentralisation of ICT services i.e. Internet, Intranet to government offices around the country;

- Implementation of a Population Register and an integrated Criminal Justice system. The Population Register system supports a Personal Identity Number subsystem that issues a personal identity card linked to an Automated Finger Identification biometrics system;
- The Criminal Justice system integrates the functions of the Police, Magistrates offices, the High Court and Correctional services;
- Government ICT services are provided by a dedicated ISP. Through a phased project, the initial phase entailed web page development/design for all ministries and departments. The next phase will entail:
 - The provision of Intranet services for the same including government forms on line;
 - Development of an ICT security policy/strategy including the implementation of security tools;
 - Development of an ICT business continuity policy/strategy;
 - Computerization of the Tinkundla - Deputy Prime Ministers office;
 - Computerization of the schools and colleges - Ministry of Education;
 - Creation of a national data base for the disbursement of drugs for HIV/AIDS patients - Ministry of Health;
 - Development of an integrated personnel system; and
 - Development of an ICT Master Plan from which an e-Government strategy will evolve (Oyomno and Ramatlhape, 2004).

2.6.3 ICT expertise in government ministries

Three broad categories were noted by Oyomno and Ramatlhape (2004: 26) with regard to ICT expertise in government: ICT specialists and professionals, specialist ICT users, and for lack of a designation, the third category was referred to as champions or drivers. Regarding ICT specialists and professionals; they are based in the Computer Services Department (CSD). CSD has an in-house staff complement of 65 of whom 52 have technical and professional training in computer related disciplines, and the remaining 13 perform administrative and financial support functions.

On ICT users in government, Oyomno and Ramatlhape (2004: 14) noted a new and emerging category of experts in various ICT application environments. Although the number of specialist ICT users in government is small and could not be ascertained, evidence of their presence and the important contribution they make in expanding the scope of ICT applications beyond conventional information systems, was found. The specialists as reflected in Oyomno and Ramatlhape (2004: 14) are presently confined to their respective ministries and departments.

On the issue of technological application champions, Oyomno and Ramatlhape (2004: 14) state that the officers with technology application championship skills and capabilities occupy relatively senior leadership positions in government from which they drive ICT applications to support programmes under their responsibilities. These officers demonstrate exceptional understanding of the potential beneficial capabilities of ICT to improve government efficiency, effectiveness and responsiveness and strive to accomplish just that. However, as observed by Oyomno and Ramatlhape (2004: 14), the Swaziland Government struggles to attract and retain a sufficient number of ICT professionals. This is a major constraint to the development and implementation of e-Government. This situation is not unique to the Swaziland Government, but is a widespread problem for a number of governments worldwide.

2.6.4 ICT initiatives in Health

The Ministry of Health and Social Welfare has a programme to network all health facilities, hospitals and health centres. The hospitals and health centres are equipped with computers while the clinics are not. The World Health Organisation (WHO) and other development partners have been supporting Ministry Internet access efforts although this has not been sustainable. Through the National Emergency Response Council on HIV/AIDS (NERCHA), the Ministry submitted a proposal to support Internet connection to hospitals to facilitate communications. Capacity building has been included as part of the package for these initiatives after having been identified as a weakness (NICI, 2008).

2.6.5 E-Government initiatives

In one study, Oyomno and Ramatlhape (2004) found three programmes that qualify for consideration as e-Government initiatives. The Swaziland government website project is clearly an e-Government initiative. The criminal justice systems project is also an e-

Government initiative because of its online features that can be extended to all parts of the country through Internet enablement. The Public Sector Management Programme (PSMP) is also considered an e-Government because it shared the same goals with any e-Government initiative ó to transform government institutions to make them more efficient, effective and responsive. Furthermore, by defining e-Government as an information-age government, one can locate e-Government initiatives in the same context as PSMP. The Swaziland National Archives is also in a process to implement an Electronic Document Management System (EDRMS) which is also considered as an e- Government initiative. This system aims to improve Government information processing, promote the development of electronic document and record management and archiving in the ministries and departments.

2.6.6 Government-wide applications

The government-wide applications have a whole-of-government scope, run in a mainframe environment and in a WAN configuration. The study revealed that government-wide applications comprise two broad categories of applications namely, mainframe applications or client-server applications. (Oyomno & Ramatlhape,2004).

2.6.6.1 Mainframe applications

Mainframe applications form the backbone of government computing systems. Information provided by the Director of Computer Services revealed that government applications run in a mainframe environment and a WAN configuration. Most of these applications are both government-wide and countrywide. All applications were developed in-house by the Department of Computer Services. The study revealed that mainframe application systems include but are not limited to the following:

- (a) Accounting System.** The accounting system belongs to the Treasury but is used by all government ministries and departments. This system is used daily, almost hourly and integrates with the revenue, budget, payroll and income tax systems.
- (b) Revenue system.** Like the accounting system, the revenue system belongs to the Treasury and is used by all ministries and departments with revenue generating streams. The revenue system combines subsystems specifically used by the Departments of Customs and Excise, Income Tax and Treasury.
- (c) Budgeting system.** The budgeting system is also owned by the Ministry of Finance as the main user, but is used by all ministries and departments. The system is made use

of during peak budgeting season, which starts with submissions from various heads (ministries and departments) to the Treasury.

- (d) Human resource system.** The human resource system (HRS) is owned by the Ministry of Public Service and Information but is used by all other ministries. It is used daily and integrates with accounting budgeting and payroll systems for purposes of information sharing.
- (e) Establishment of Register System.** This is another human resource management system owned by the Ministry of Public Service and Information. The system sets out the number of posts as well as the grades for the entire civil service. The information that the system generates feeds into the planning and budgeting process.
- (f) Central Transport Administration System.** Located at and owned by the Central Transport Administration, the system is a motor vehicle system supporting all aspects of motor vehicle transportation.
- (g) Motor Vehicle Licensing System.** Owned by the Treasury - is used for the registration permits and the licensing of motor vehicles and drivers.
- (h) Criminal Justice System.** This system was developed for the Ministry of Justice and Constitutional Affairs, the Police Department, Home Affairs and Correctional Service. It includes : Criminal and Civil Litigations; Guardian Fund; Population Register; Registration of Births; Deaths and Marriages; Criminal Investigations and Previous Conviction systems; Road Traffic Accidents; Scene of Crime Investigations and Automated Fingerprint Identification Systems. Of particular interest in this suite of applications is the system that creates and maintains an electronic version of the national population register, giving each individual a unique, 13-digit, national identification number (PIN) and fingerprint identification. The fingerprint identification system updates criminal records maintained by the Police Department.
- (i) Call Logging System.** The system is used by the Help Desk Services to log calls. It was developed in-house and is running on a Natural/Adabas platform. Although the system has other functions that provide statistical reports, evidence of their use was not found.
- (j) Immigration system.** Owned by the Department of Immigration and used to process all manner of travel documents including passports, border control, citizenship, and visa issues.
- (k) Other systems.** Other systems in government include, deeds management owned by the deeds department of the Ministry Of Justice And Constitutional Affairs, a

scholarship system that the Ministry of Education owns and uses and the examinations system, which is owned and used by the Examinations Council of the Ministry of Education (Oyomno & Ramatlhape,2004).

2.7 Summary

This chapter discussed the location and context of the study. It provided a background on the political history and socio- economic conditions of Swaziland. The chapter also provided an overview of records management infrastructure in government ministries in Swaziland. The ICT environment in Swaziland is being developed and there is evidence to support this, such as ICT policy and the increase of usage of computers in government ministries. The chapter therefore provided an overview of the context of the current study, paving the way for the next chapter which discusses the theoretical framework and the literature review.

CHAPTER THREE

LITERATURE REVIEW AND THEORETICAL FRAMEWORK OF THE STUDY

3.1 Introduction

Literature review plays a significant role in that it enables a researcher to benchmark with other related studies so as to establish what has already been researched on in relation to the particular topic and to identify gaps which the researcher's own study can now address. The review should highlight concepts and theories on the subject area (Bhattacharjee, 2012; Bless & Higson-smith, 1995; Hart, 1998; Sarantakos, 1993). This chapter presents a review of literature with respect to key contending theories and models relevant to the current study topic, in cognizance of the objectives and subsequent research questions.

In view of the study objectives and subsequent research questions, this chapter reviews literature structured around the following themes:

- benefits and characteristics of a review of literature;
- theoretical framework;
- the use of theory in quantitative, qualitative and mixed methods approaches;
- records management models and theories;
- theoretical underpinning of the study;
- approaches to e-Government implementation;
- approaches to e-Record readiness assessments;
- readiness assessment models/tools;
- management of e-Records in the context of e-Government;
- management of e- Records in the context e-Government in Swaziland;
- empirical studies on e-Records readiness assessments in Africa and Swaziland; and
- the need for e-Records readiness assessment in the context of e-Government in Swaziland.

Figure 3.1 illustrates the Literature review map.

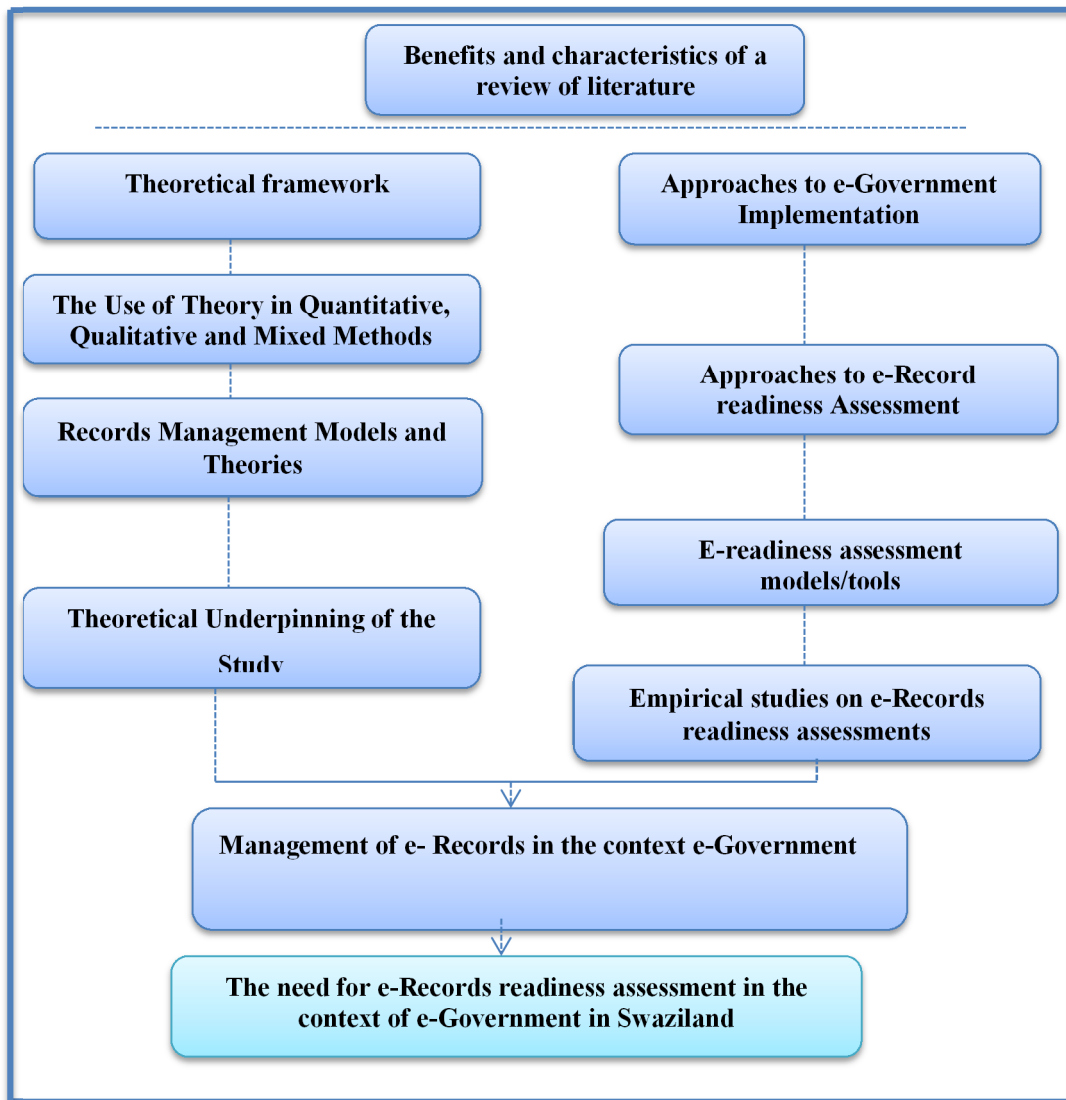


Fig. 3.1. Literature review map

3.2 Benefits and characteristics of a review of literature

According to Punch (2000), it is axiomatic that: “All social research has relevant literature, and no research takes place in a vacuum.” Jankowicz (2000) confirms that: “Knowledge doesn’t exist in a vacuum, and your work only has value in relation to other people’s. Your work and findings will be significant only to the extent that they’re the same as, or different from, other people’s work and findings.”

Busha and Harter (1980) view a literature review as “an in-depth analysis, synthesis and evaluation of information sources to gain insight and understanding of the problem under investigation”. Neuman (2000) explains that a literature review is based on the assumption that knowledge accumulates and that we learn from and build on what others have done. An

integrative review presents the current state of knowledge and pulls together disparate research reports in a rapidly developing area of knowledge.

The purpose of a review of the literature is to describe the work that has been reported on a subject or area. It demonstrates an individual's ability to identify meaningful information and to describe existing knowledge. This helps close the gap in research that will address the work and will generate a rationale or justification for the study. The main purpose of a literature review is to demonstrate academic ability, identify information and describe the knowledge presented. It places each work in the context of its role in understanding the subject under study. In addition, it explains how the information about the report will be used to complete the original goal statement. The examination is also useful for describing the relationships of each work with the others considered (Creswell, 2014).

Machi (2009) asserts that literature serves to identify new ways to understand, and shed light on any gap in the previous research as well as the position on the way forward for further research. Resolving conflicts among apparent contradictory previous studies too is a crucial purpose of the review. It also identifies areas of prior studies to prevent duplication.

To an extent, many of the perceived benefits of literature review come from corresponding disadvantages of conventional narrative reviews. Its major benefit is subjective; it may be a selective choice of an article to support the author's point of view. The review addresses clearly focused questions. It counts each study as an equal unit in a straw poll to attain consensus, without considering that studies have different sizes, and varying robust methodologies. It considers the value of the methodology of the constituent rather than dramatically regarding the conclusion of all as a valid voice (Neuman, 2006).

The process of drawing conclusions from an individual study is frequently obscure, and the methodology is often not effectively described to enable a replicating process. The methodology has an explicit enclosure and exclusion criteria for studies.

Cooper (2010) argues that combining data is justified, especially where a mathematical meta-analysis aspect like difference of the study is addressed. In addition there is a definite benefit in using the meta-analytic method in a literature review as it makes the evaluation more applicable. It combines studies from diverse environments, making generalizations to other

populations more justifiable. Its effectiveness is illustrated consistently across a range of studies.

According to Allan (1996), results can be obtained not as a subjective discussion of the trend, association and relationship, but as defined numerical values, with assured intervals and estimates of the interventions effect.

In other words literature review limits biasness in identifying and declining studies. The conclusions are more reliable and precise due to the techniques employed. A large amount of information is incorporated quickly by the people. Allan (1996) argues that literature review reduces delay between research discoveries and implementation of successful diagnostic and beneficial strategies. Alanø (1996) review recognizes the inconsistency in results across studies. At the same time, a quantity systematic review enhances the precision of the overall result. It has a bigger and more methodologically sound study which can be weighed to have more power. It also provides consistency and generalizing of findings.

The characteristics of a good literature review includes exhaustiveness but not necessarily bulky; representative, and directly related to the research problem; and chronology in the review (Peters,1994). Other characteristics include: critical and analytical review, avoiding castigating other scholars if they fell short of a researcher's expectations. Saunders, Lewis and Thomhill (1997) observed that a literature review needs to be critical and should incorporate key academic theories within the chosen area of study and show how the research relates to previous published research. It also needs to assess the strengths and weaknesses of previous work, including omissions or bias, taking into account central arguments and justifying arguments by referring to previous research.

There are various types of literature review, for instance, Neuman (2006:89) identifies five types of literature reviews:

- Context review, in which the author links a specific study to a larger body of knowledge;
- Historical review, in which an author traces an issue over time;
- Integrative review, in which an author presents and summarizes the current state of knowledge on a topic, highlighting agreements and disagreements within it;

- Methodological review, in which an author compares and evaluates the relative methodological strength of various studies and shows how different methodologies, for example research design, measures and samples, account for different results, whereas in a self-study review an author demonstrates his or her familiarity with a subject area; and
- Theoretical review, in which an author presents several theories or concepts focused on the same topic and compares them on the basis of assumptions, logic, consistency and scope of explanation.

The present study adopts a combination of integrative, thematic, theoretical and empirical approaches to presenting the literature related to the study as advocated by Kaniki (2002). In reviewing the literature, an attempt was made to indicate the strengths and limitations of the sources used and how the current study benefits from the sources used.

3.3 Theoretical framework

This section provides the theoretical framework. It discusses the theories that underpin the current study.

Mikkelsen (2005:157) defines theory from the scientific viewpoint as "a system of interconnected abstractions or ideas that condenses and organizes knowledge about the social world." Creswell (2003:165) defines theory as "an interrelated set of constructs or variables formed into propositions, or hypotheses, which specify the relationship among variables". Kalusopa (2001:48) defines theory as analytical tool that exists in different fields of study for understanding, explaining and making predictions about a phenomenon or subject matter. Ocholla and Roux (2011) also note that a theory serves as a lens through which a researcher examines a particular aspect of his or her subject field.

A theoretical framework is a conceptualization of how one theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem (Sekaran, 2003:157). In view of the fact that we live in a time of intellectual ferment, scholars rely on basic assumptions regarding the nature of reality and the purpose and methods of investigation. Theories enable researchers to draw new conclusions, improve action and generate more sophisticated theories (Dale, 1998). Theoretical framework is a type of intermediate theory that attempts to connect to all aspects of inquiry (Botha, 1989:1;

Kalusopa, 2011:48). Botha (1989:1) and Kalusopa (2011:48) posit that the problem definition, purpose, literature review, methodology, data collection and analysis of any inquiry are woven by a conceptual or theoretical framework. Conceptual frameworks can act like maps that give coherence to empirical inquiry which means that because conceptual frameworks are potentially so close to empirical inquiry, they take different forms depending upon the research question or problem.

Theories have four purposes in scientific research, namely description, explanation, prediction and control. Theories generate new knowledge and new hypotheses about behavior, which could be confirmed or contested through research. Research could reveal weaknesses in a theory and force researchers to modify or develop a new and more comprehensive theory (Cozby, 2001).

The models are graphic presentations of concepts or variables researchers use to depict a problem. According to Botha (1989), Cornford (1991) and Kemoni (2007) a model is a simplified representation of a real situation including the main features of the real situation it represents. In other words, there are different ways to illustrate the principles governing a given instruction (Boman et al., 1997; 48; Salkind and Miller, 2002; 46. But Katz and Harvey (1994) described that model, "and every description of abstract ideas into reality." Models are of great help to achieve clarity and focus on the key questions of the nature of things (Cohen and Manion 2000: 12). There are questions that provide the tools for the research of standards, which, if pursued, might get a better understanding of the case investigated (Mouton and Marais 1993: 139).

The relevance and applicability of models to the real world depends on three factors, namely realism of the model assumptions, consistency of the assumptions with one another and accuracy of the data to validate the assumptions (Dwivedi 2001:17). Kebede (2002:8-9) posited that models are useful for specifying what constituted the phenomena of interest, identifying research focuses and advancing theory in relation to the phenomena they modeled.

3.3.1 The use of theory in quantitative, qualitative and mixed methods approaches

Grant and Osanloo (2014) argue that the theoretical frameworks can be used in qualitative, quantitative and even mixed methods to structure all the characteristics of research. The current study adopted a mixed approach covering both quantitative and qualitative approaches. According to Creswell, (2003) in quantitative studies, theories are used deductively and are placed at the beginning of the plan for a study. In this case, the researcher uses theory to test the theory instead of developing it (Sichalwe, 2010). On the other hand, in qualitative studies, theories are used both to explain the behavior and attitude of participants and to explain variables, constructions and assumptions. In this case, the researcher is guided on the important topics to be examined, the people to be studied, how the researcher should be positioned in the qualitative study and what the final report should be. In mixed methods approach, the use of theories may be directed by the emphasis on either qualitative or quantitative approaches (Creswell, 2003). This current study adopted the mixed methods approach where the quantitative approach was dominant and the qualitative approach was less dominant. In this regard, the e-Records Readiness Assessment Tool (IRMT, 2004) was used as a theoretical framework that underpinned the study. It was complemented by the Records Life Cycle, the Records Continuum Model and the Integrated Approach model.

3.3.2 E-Records readiness tool

E-Records readiness is the capacity to create, manage, share, and use e-Records to support good governance (Lipchack & McDonald, 2003). E-Records readiness assessment tools are instruments or methodologies that can be used to evaluate the e-Records readiness capacity of organisations through assigning several measurement criteria that address the required institutional, legal framework, ICT as well as the records and information management infrastructure in an e-environment (IRMT, 2004; McLeod, Childs & Heaford, 2006). The IRMT developed e-Readiness assessment tools to assist developing countries such as Swaziland to conduct high-level assessments of key areas of e-Records readiness in relation to other aspects of e-Government and to determine whether or not the records and information management infrastructure is capable of supporting e-Government initiative (IRMT,2004).

The IRMT (2004:1) argues that in most countries, ðearly stages of e-Government implementation tend to focus on enabling technologies and architectures to support online delivery of government services and information and as these architectures matureö, the focus is increasingly directed to the quality and integrity of digital information and e-Records that are created, managed and delivered as a result of electronic applications.

Mnjama and Wamukoya (2007:280) carried out a study to establish if there is a relationship between ðthe state of paper-based records systems and the success or failure of automation projects. They found that in many cases, filing systems are unreliable and inconsistent, resulting in poor information capture and accessö. To address these issues, Mnjama and Wamukoya (2007:16) proposed that:

automated systems cannot simply be super-imposed on a dysfunctional or chaotic paper system as this has often been a recipe for failure in many countries. Given that African governments have largely operated in a paper-based environment for a very long time, the change process from paper to electronic systems is bound to be more complex than is often realised. There is the need to fix the paper mess before contemplating to automate. When a decision is reached to automate, there is the necessity to maintain some sort of hybrid system, which allows for parallel or complimentary paper and electronic systems to co-exist for a period of time.

The IRMT (2005:5) also carried several studies (mostly in Africa) which revealed various challenges and impediments to the management of both paper and e-Records in developing countries as follows:

- absence of records management legal framework, policies and procedures;
- absence of organisational plans for managing e-Records;
- low awareness of the role of records management in supporting organisational efficiency and accountability;
- absence of core competencies in records and archives management;
- lack of appropriate facilities and environmental conditions for the storage and preservation of paper as well as e-Records;
- absence of dedicated budgets for records management; poor security and confidentiality controls;
- absence of migration strategies for e-Records; and

- absence of vital records and disaster preparedness and recovery plans.

The International Records Management Trust (IRMT) and the World Bank started a programme in 2003 with the purpose of developing an assessment tool "that will support governments and other agencies to assess their e-Records readiness against internationally accepted standards" (Kalusopa, 2011:108). Though the e-Records readiness assessment tool was designed to assist governments determine whether or not records management requirements are integrated into ICT systems, it could also be adapted to other organizations as well.

The development of the tool came about after IRMT realized that some of the existing tools did not properly assess levels of e-Records readiness in organisations as "the tools do not permit an accurate assessment of e-Records readiness" (IRMT, 2004:2). The tool is a brief questionnaire that divides e-Records readiness into the 12 high-level components listed below, that make up the framework for managing e-Records for example laws, policies, procedures and ICT infrastructure.

1. Legal mandate for the government-wide management of public records and information
 2. Legal framework for e-commerce
 3. Freedom of information and protection of privacy legislation
 4. Government-wide ICT infrastructure and capacity
 5. Government-wide e-Records management standards and guidelines
 6. Government-wide digital preservation strategy
 7. Policies and responsibilities for records and information management
 8. E-Records management products and technologies
 9. Resources and training for records and information management personnel
 10. Tools and procedures for records and information management
 11. Internal and public awareness of records and information management
 12. Compliance with records and information management policies and procedures.
- (IRMT,2004: 1)

The first six components of the questionnaire addressed national, government-wide e-Records readiness, which include: legal mandate for the government-wide management of public records and information; legal framework for e-Commerce activities; freedom of

information (FOI) and protection of privacy legislation; government-wide ICT infrastructure and capacity; government-wide e-Records management standards and guidelines, and government-wide digital preservation strategy (IRMT, 2004:1). The last six components address agency-specific e-Records readiness (IRMT, 2004).

The IRMT components also address some areas of concern heightened by participants from around the world during an Electronic Discussion on Electronic Government and Electronic Records: E-Records Readiness and Capacity Building organized by the IRMT and the World Bank, with funding provided by the Commonwealth Secretariat. The participants were asked to identify three key e-Records readiness issues in their countries. In other words, what issues, concerns, or realities affect (positively or negatively) the ability of governments or institutions to manage electronic records and the products of information and communications technologies? The areas of concern, considered as critical to e-Records readiness and to the ability of governments or institutions to manage e-Records, are:

1. The lack of understanding by staff at all levels, of the purpose and nature of "records" and record keeping, the need for existence (decision-making, program / service delivery, accountability, etc.), and their responsibilities for managing records over time.
2. The perception - or misperception - that information technology will solve all information management problems and increase government and international attention on information technology without parallel support for management programs, including the care of both paper-based and e-Records.
3. Despite the perception of the power of information technologies (above), the reality of a "digital divide" in the electronic age and the disparity around the world in levels of access to information technologies, this leads to challenges in managing, preserving, and making available information and records in electronic form.
4. The lack of clarity about how to create/capture, manage, protect, and preserve electronic records and the products of information technologies, coupled with continuous change in technologies and systems.
5. The absence of or weakness in legislation and policies - including formal frameworks for accountability - for the management of information technologies and their products, including electronic records, as well as for paper records.

6. The lack of systems, standards, practices, and guidelines for the management of IT products and electronic records, or the difficulty of obtaining or applying existing standards effectively.
7. The need for effective strategies for records professionals and others to know where to start, who to contact, and how to move forward to deal with the above issues (IRMT, 2003).

The model that has been adopted will be used as a blue print that will guide and give direction to the study. Such guidance will make it possible for the research to generate appropriate answers to the questions of the study.

3.3.2.1 Relevance of the e-Records readiness model to the study

The aim of the study was to assess e-Records readiness in government ministries in Swaziland with a view of conceptualising a framework for the effective management of e-Records as a tool to facilitate and realize e-Government. The following research questions are addressed:

- What is the national legal and policy framework governing management of electronic records in government ministries in Swaziland in context of e-Government?
- Is there any compliance to policies, standards, tools, procedures and responsibilities in e-Records management in the government ministries?
- What e-Records management products and technologies exist in the government ministries?
- Is there resource capacity and training for e-Records management staff in government ministries?
- Is there any internal awareness of a link between e-record management with e-Government strategy in the government ministries?
- What is the depth of government wide digital preservation strategy in the government ministries?
- How can the e-Records be managed appropriately in the context of e-Government?

Government ministries in Swaziland are adopting information and communication technologies as tools for providing effective and efficient services to their citizens. An e-Government is characterized by three principles: improving service delivery, strengthening accountability, increasing transparency, or improving government efficiency (Ndou, 2004).

Governments commit to publicly disclosing government operations by making relevant information available to citizens (Wamukoya, 2013). To achieve the three principles, ICTs act as a facilitator to achieve this objective. Therefore, in order to implement e-Records management, there is a need for a thorough e-Records readiness programmes and e-Government in the public sector. The tool therefore appropriately guides the study by providing a relevant mechanism for assessing the e-readiness in the ministries relating to national legal and policy framework governing management of e-Records; compliance to policies, standards, tools, procedures and responsibilities for records management; e-Records management products and technologies; skills and competencies among records management staff; the level of awareness and attitude of staff towards sound records management practices and the depth of government wide digital preservation strategy. Moreover the e-Records readiness tool was developed by the IRMT, a charitable organization in the United Kingdom specifically to be used in developing countries to assess their e-Records readiness. It therefore suits the current study very well since it is applied in an environment that the tool was designed to be used in.

3.4 Approaches to e-Government implementation

With advancing Internet technologies and infrastructure, various governments around the world have tapped on information and communication technology (ICT) to serve its communities and citizens more efficiently and effectively. E-Governments websites or portals provide governments the best opportunities to improve their administrative processes and procedures, to connect to their citizens effectively as well as to build and bond interactions with its societies, businesses and institutions (Heeks, 2008). E- Government is a relatively new wave that is sweeping through countries all over the world (Mutula, 2010).

E-Government is an integrated concept of innovating governance and services by using information technology, whose connotation lies in the establishment of a virtual government capable enough to provide citizens with convenient, fast and high-quality public services. E-Government is meritorious in aspects of improving the Government response strength, the policy capacity and efficiency so as to form an open and responsible government aiming to ultimately improve one country's competitive power (Zhongkun,2008). Therefore, e-Government construction has become a worldwide trend of government reorganization. The realisation of e-Government is based on the premise of the openness of government

information, the electronisation of government business, the innovation of government services, as well as the integration of information technology and government reorganization.

The combination of computer, a newly emerging information technology embryonically developed since 1960, and the Internet, a communication technology becoming universal in the early 1990s has caused a revolution in terms of efficiency in accessing information by human being. The advantages of computer technology lie in the high information processing speed, high-accuracy, and strong storage capability. This can increase productivity, and support decision-making. In addition, the internet can bridge time and space constraints and can break the national boundaries so as to develop productivity to a higher level (Zhongkun,2008).

Information and communication technologies (ICTs) have had a great impact in many organizations as well as governments, facilitating the transformation of an information economy. The evolution of technology has promoted government and other business entities across the world to take advantage of information and communication technologies (ICTs) and offer their services online (Mason, 2012). On a worldwide scale, the global information economy is gradually taking the place of the industrial social economy which has long dominated the 20th-century (Zhongkun, 2008). With the provision of information and knowledge services becoming a dominant social and economic industry, and the management of information resource and knowledge becoming the core area of all industries, social economy is heading for globalization. Such changes provide affluent evidence for the exact existence of information economy and information society.

3.4.1 Types of e-Government

Literature indicates that e-Government offers services to those within its authority to transact electronically with the government. These services differ according to users' needs, and this diversity has given rise to the development of different types of e-Government. E-Government functions can be classified into four main categories.

3.4.1.1 Government-to-Employee (G2E)

Government to employee is the least researched sector of e-Government, Some researchers consider it as an internal part of G2G sector and others deal with it as a separate sector of e-

Government (Riley, 2003). G2E aims to place the public service human resource base at a competitive advantage so that affluent service delivery is achievable (Markellou et al., 2003).

G2E refers to the relationship between government and its employees only. The purpose of this relationship is to serve employees and offer some online services such as applying for leave online, checking leave balance, and reviewing salary payment records, among other things (Seifert, 2003). It is a combination of information and services offered by government institutions to their employees to interact with each other and their management. G2E is a successful way of providing e-learning, bringing employees together and encouraging knowledge sharing among them. It gives employees the possibility of accessing relevant information regarding compensation and benefit policies, training and learning opportunities, and allowing them access to manage their benefits online with an easy and fast communication model. G2E also includes strategic and tactical mechanisms for encouraging the implementation of government goals and programs as well as human resource management, budgeting and dealing with citizens (Ndou, 2004).

3.4.1.2 Government-to-Citizen (G2C)

The majority of government services come under this application; this is government's endeavour to provide citizens and others with comprehensive electronic resources to respond to individuals' routine concerns and government transactions. G2C will continuously communicate when implementing e-Government, thus supporting accountability, democracy and improvements to public services. Citizens are accorded the chance to effectively participate in the governance protocols and influence the direction of policy using ICT. The primary goal of e-Government, is to serve the citizen and facilitate citizen interaction with government by making public information more accessible through the use of websites, as well as reducing the time and cost to conduct a transaction (Ndou, 2004). In applying the idea of G2C, customers have instant and convenient access to government information and services from everywhere anytime, via the use of multiple channels. In addition G2C also facilitates appropriate citizen- government interaction and is generally perceived as the primary goal of e- Government (Seifert, 2008:194).

3.4.1.3 Government-to-Government (G2G)

G2G enables different government line ministries, departments and agencies to seamlessly integrate, thereby facilitating faster and efficient public service delivery and transparency (Bwalya, 2011). The efficiency and efficacy of processes is enhanced by the use of online communication and cooperation which allows for the sharing of databases and resources and the fusion of skills and capabilities. It renders information regarding compensation and benefit policies, training and learning opportunities, and civil rights laws readily accessible (Ndou, 2004). The aim of G2G development is to enhance and improve inter-government organizational processes by streamlining cooperation and coordination. Seifert (2008:15) attributed the driving force of G2G applications to reduction of government business transactions costs and the desire to increase efficiency and speed of these transactions. On another front, the use of information technologies by different governmental agencies to share or centralize information, or to automate and streamline intergovernmental business processes such as regulatory compliance, has produced numerous instances of time and cost savings and service enhancement within G2G(Gregory, 2007).

3.4.1.4 Government-to-Business (G2B)

Government to business allows interaction between government and different business establishments (Bwalya, 2011). G2B brings significant efficiencies to both governments and different business establishments. G2B includes various services exchanged between government and the business sectors, including distribution of policies, memos, rules and regulations. Businesses can also benefit from this arrangement by obtaining current business information, new regulations, downloading application forms, lodging taxes , renewing licenses, registering businesses, obtaining permits, and many others. The services offered through G2B transactions also play a significant role in business development, specifically the development of small and medium enterprises (Pascual, 2003). Fang (2002) argued that G2B applications actively drive e-transaction initiatives such as e-procurement and the development of an electronic marketplace for government purchases. In addition, G2B carry out government procurement tenders through electronic means for exchange of information and goods. E-Procurement makes the bidding process for government projects transparent and does not leave room for corruption practices (Banerjee& Chau, 2004). This system benefits government from businessø online experiences in areas such as e-Marketing strategies. The government-to-business G2B is as useful as the G2C system, enhancing the

efficiency and quality of communication and transactions with business also. It increases the equality and transparency of government contracting and projects (Moon, 2002).

E-Government interactions (individuals, constituents, businesses, employees or perhaps government organisation) are grouped according to Siau and Long (2005) with different perspectives. Among the four areas, G2C and G2E involve interaction and cooperation between government and individuals, while G2B and G2G deal with the relationship between government and organisations. Moreover, G2C and G2B involve external interaction and collaboration between government and outside institutes, such as individual citizens and businesses; while G2E and G2G involve the internal interaction and cooperation between governments and their employees, as well as between governments at different levels and distributed locations (Hassan, 2011). Table 3.1 shows this classification, along with the objective and activities for each of the four areas.

The e-Government approaches show that there are many stakeholders that the government of Swaziland is supposed to deliver servers to through e-Government. In order for this endeavour to be successful, all the stakeholders need to be linked by an effective e-Records system that is harmonised with the e- Government strategy.

Table 3.1 Summary of e-Government areas

The government interacts with	Internally	Externally
<p>Individuals(Ordinary citizens and Civil servants and Volunteers)</p>	<p>E- Government type : G2E Objective:</p> <ul style="list-style-type: none"> To improve internal efficiency and effectiveness of government administrative processes <p>Activities:</p> <ul style="list-style-type: none"> Recognising internal operational processes to adopt best practices Providing services to internal employees such as training, payroll, travel and reimbursement Automation of government administrative processes 	<p>E- Government type: G2C Objective:</p> <ul style="list-style-type: none"> To provide satisfactory service to citizens in order to improve government-citizen relationship <p>Activities:</p> <ul style="list-style-type: none"> applying for certificate, license and permit booking, eg marriage registration submitting information, e.g. job opening doing payment accessing public information, etc.
<p>Organisations (Government departments, agencies and Business enterprises)</p>	<p>E- Government type : G2G Objective:</p> <ul style="list-style-type: none"> To enhance cooperation and collaboration between governments of different levels and various locations <p>Activities:</p> <ul style="list-style-type: none"> Sharing or integrating federal, state and local government databases, as well as integrating separate systems. Enhancing collaboration or cooperation such as grants, law enforcement, public safety, and emergency management 	<p>E- Government type : G2B Objective:</p> <ul style="list-style-type: none"> To provide better services to businesses such as eliminating redundant collections of data and reducing transactions cost. <p>Activities:</p> <ul style="list-style-type: none"> Providing a single portal and integrated database Entering the e-market to gain cost-efficient benefits

3.5 Approaches to e-Record readiness assessment

The concepts of e-readiness and e-Records readiness may sound similar, but they are conceptually different (Kalusopa, 2011). E-Records readiness can be defined as the depth and breadth or the capacity of organisations in having the required institutional, legal framework, ICT infrastructure anchored on a systematic records and information management programme (Kalusopa, 2011). It is the depth and breadth or the capacity of organisations in

having the required institutional, legal framework, ICT infrastructure, and, records and information management programme based on the generic information and recordkeeping practices (IRMT, 2004). On the other hand, Computer Systems Policy Project (CSPP) (2006) define e-Readiness with respect to a community that has high-speed access in a competitive market; with constant access and application of ICTs in schools, government offices, businesses, healthcare facilities and homes; user privacy and online security; and government policies which are favourable to promoting connectedness and use of the network (Bridges.org, 2001).

Mutula and van Brakel (2006: 212) agree and recommend the need for a complete tool. They further suggest that the tool should focus on access to information, and should cover readiness of information; business readiness, human resource readiness, ICT (infrastructure) readiness and readiness of the external environment.

Therefore e-Records readiness assessment tools are instruments or methodologies that can be used to evaluate the e-Records readiness capacity of organisations through assigning several measurement criteria that address the required institutional, legal framework, ICT as well as the records and information management infrastructure in an e-environment (IRMT, 2004; McLeod, Childs & Heaford, 2006). The present study aims to assess e-Records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government. These concepts and their relevance to the current study are articulated in the sections that follow.

3.6 E-readiness assessment models/tools

The development of the first e-Readiness models and tools, and several models and tools for e-Readiness were generated by research development agencies, governments, research organizations, companies and individuals (Mutula & van Brakel, 2006).

Assessments of e-Readiness are different in terms of strategies, objectives and results (Mutula, 2010). Potnis & Pardo (2011) note that e-readiness assessments are designed to assess the capacities and opportunities of governments and organizations offered by e-government initiatives. They have emerged as opportunities to collect, organize, share and manage information communication technology (ICT) data. Musa (2010) also observes that

e-Readiness has the variety to offer diverse uses in different ways. There are several models and tools for assessing e-Readiness that have been developed and applied in most countries. The models and tools for assessing e-Readiness are divided into two classes according to the objectives of the assessment. Models and tools are categorized as those that focus on infrastructure or nation-building for business or economic growth (e-Commerce) and those that focuses on the company's capacity to benefit from ICT. The models and tools for assessing the state of the situation can also be considered in terms of electronic society, electronic economy and electronic system, where electronic systems models examine the underlying technological infrastructure electronic economy and electronic society (Bridges Org, 2001). Renu and Sameer (2002) identified electronic infrastructure and e-Governance as two additional areas for the development of electronic society on electronic infrastructure. They continue to assert that they should be in institutions, hardware and software, while the emphasis on e-Governance lies in the re-engineering of government processes and in the most expeditious and transparent ways of delivering government services to citizens.

Although these studies generally reviewed e-Readiness and not the readiness of e-Records, it gives credit to the present study which emphasizes the need to adopt the national e-Readiness as part of a wider and richer understanding of e-Readiness in government ministries in Swaziland.

3.7 Empirical studies on management of e-Records and in the context of e-Government

Several scholars contend that it is now almost impossible to study the outcome of e-Government processes without referring to e-Records in the digital environment. For example, Nolan (2001:188) regards the use of ICT systems as a dominant reform model for the public service when linking the implementation of ICT to effective documenting of government services and knowledge sharing. Good record keeping is thus essential for governments and public institutions at all stages of development; particularly so for developing countries. Poor record-keeping systems are a major barrier to institutional, legal and regulatory reform; anti-corruption strategies; poverty reduction and economic development (Lipchak and McDonald, 2003).

Electronic records are the by-products of e-Government functions in which the information is represented in digital form, whether it is text, graphics, data, audio or images. Electronically-generated information provides crucial improvements in the efficiency and effectiveness of service delivery as citizens can interact with government agencies online without having to physically visit the offices (Kamatula, 2010: 152).

According to the International Records Management Trust (IRMT) (2004), e-Records management programmes in most governments around the world have been motivated in part by the ongoing public sector reforms. Governments are recognizing the need to facilitate access to public services through e-Government. IRMT (2004) further noted that e-Government has led to generation of vast quantities of e-Records. Research in the management of e-Records has received a lot of attention in developed countries with investigations focusing on practical solutions to the management of records (Keakopa, 2009).

Mnjama and Wamukoya (2006: 277) also state that the emergence of e-Government has led to the creation of information which is in fact a valuable asset that must be managed and protected. In addition to providing essential evidence of organizational activities, transactions and decisions, e-Records also support business functions and are essential for assessing organizational performance. Without reliable e-Records, governments cannot manage state resources, revenues or public administration. Governments cannot provide services such as education and medical care. On the other hand, without accurate and reliable e-Records and an effective system to manage them, governments cannot be held accountable for their decisions and actions, and the rights and obligations of citizens and legal entities cannot be maintained.

The following sections, therefore, discuss trends in the development of guidelines and strategies in the management of e-Records and e-Government in selected parts of the world based on the stipulated international records management standards.

3.7.1 Management of e-Records and e- Government in developed countries

Xiaomi (2009) conducted a study to investigate the status of e-Records management in the context of e-Government in USA, New Zealand and UK to help support the development of ERM in China. The main aim of this study was to investigate how the United States, United

Kingdom and New Zealand are managing e- Records, implemented e-Records systems and to determine what the corresponding implications in e-Government were. The findings of the study were to assist the Chinese government in improving management of e-Records in the context of e-Government. The study adopted documentary review as a data collection instrument where data was collected through documentary review of laws, policies and procedures from the three countries, for the management of e-Records together with the e-Government. The study revealed that in all the three countries, management of e-Records was successfully embedded in e-Government strategies.

In the United States, e- Records management was considered an important infrastructure for e-Government and was part of 24 e-Government initiatives (White House 2012, NARA 2006). In the United Kingdom, the management of e-Records is incorporated into departmental e-commerce strategies as part of the business continuity plan, information risk management solutions and knowledge management initiatives in the e-Government strategy. In New Zealand, the management of e-Records was seen as part of the strategy for information and digital services for the public in the e-Government strategy. The study found that in all three countries, e-Records were managed as core national assets and resources. The study recommended that management of e-Records is vital for effective e-Government, so it is necessary to integrate e-Records into the e-Government strategy and to strengthen collaboration between e-Government authorities and records management to get the benefits of e-Government.

Kalcu (2009) investigated how Turkey had adopted record management practices with the increase of e-Government services. The study sought to assess if there had been new approaches in management of e-Records as the Turkey government moved significantly to e-Government. The government agencies were selected as a main sample of the study. The study adopted a qualitative approach where data was collected through interviews and literature review. The study revealed that in Turkey, the e-Records management applications are developed within the framework of e-Government and e-Records management is considered to be significant in terms of overcoming the handicaps between the government and the citizen as well as cutting the red tape. These applications are thought to be contributory to the development of records management applications. However, it is a fact that the conditions of reliability and durability of the printed environment have not yet been achieved in the electronic environment (Kulcu, 2009). Within these conditions, carelessly

taken steps would surely lead to a disaster. In a developing country like Turkey in particular, the relative cost reduction introduced by the virtual environment, the speed and efficiency may lead every administrator to prefer e-Government and e-Records management applications as an easy solution at the beginning. However, meeting the required legal and administrative criteria related to e-Records management applications, filling the gaps, taking actions on the examples of the developed countries, and following the outputs of projects like InterPARES are considered to be quite significant (Kulcu, 2009).

3.7.2 Management of e-Records and e-Government in Africa

In a recent study Ambira (2016) investigated how management of e-Records supported e-Government in Kenya with a view to develop a best-practice framework for management of e-Records in support of e-Government. The study investigated how management of e-Records supported e-Government in Kenya with a view to develop a best-practice framework for management of e-Records in support of e-government. The study was underpinned by the European Commission's (2001) Model Requirements for e-Records Management (MoReq) and the United Nations' (2001) five-stage e-Government maturity model as theoretical frameworks. The study adopted the interpretive research paradigm and qualitative approach. The study used face-face interviews as a data collection instrument. The study revealed that the general status of management of e-Records in government ministries is inadequate to support e-Government. The utilization of e-Government in Kenya had grown significantly and more ministries were adopting e-Government services. Although some initiatives have been undertaken to enhance management of e-Records, the existing practices for management of e-Records require development to ensure that they sufficiently support e-Government. However, there are several challenges in the management of e-Records that impact on implementation of e-Government. The study concluded that the current practices for managing e-Records in support of e-Government implementation were not adequate. Ambira (2016) recommended a best-practise framework for managing e- records in support of e-Government in Kenya.

An earlier empirical study by Nengomasha (2009) provides essential insights into the current study. Nengomasha (2009) aimed to answer the research question: "How can the e- Records environment be strengthened to support e-Government in Namibia?" The study used a qualitative approach through observations and interviews as data collection techniques. The

study revealed that e-Government in the Public Service of Namibia, is in the initial phase of implementation and has led to an increase in the creation of e-Records. However, the status of records management in the Public Service of Namibia, which has a hybrid records system, that is, a paper and e-Records environment, is very poor. This is evident in the officers' lack of understanding of what records are and the importance of records management; inadequate legal and regulatory environment; failure to follow laid down procedures and standards; absence of a records management disaster plan including digital preservation strategy; and inadequate resources, which includes lack of staff and skills to manage records in general and in particular, electronic records. The Public Service of Namibia's score of 55 out of 120 in an e-Records readiness assessment carried out as part of the study, signifies high risk, which means that government's e-Records are at risk of misuse and loss. The study came to the conclusion that Namibia's e-Government initiatives are not supported by a strong records management programme. This missing link needs to be rectified to ensure that Namibia benefits fully from its investment in e-Government.

The International Records Management Trust (IRMT) conducted a study in 2010-2011 to assess the status of records management in East Africa for support of e-Government and freedom of information. The study focused on the five African countries Rwanda Kenya, Uganda, Burundi and Ethiopia. The aim of the study was to investigate the relationship between records management and the current and planned directions for ICT/ e-Government and FOI and the extent to which records are capable of providing reliable evidence for governance.

The study found that across the region, governments are aggressively pursuing ICT and e-Government initiatives are, to a greater or lesser extent, the same general path towards building FOI regimes. It also revealed the importance of records management, including the management of e-Records in policy, capacity and position and the strength of records and archival authorities.

Key recommendations include the need for developing a digital preservation plan across the five countries. These will ensure that the preservation of e-Records that is required is retained over a long-term. The study also provided reports on the five countries with different recommendations affecting each of the countries.

Nengomasha (2009) recommends an integrated records management programme for the public service of Namibia to improve the e- Records environments. Such a programme would promote records management awareness; determine resource requirements; review the legal and regulatory framework; review records management standards and procedures; develop and maintain records centres; manage archives; implement an electronic records management system; and ensure the sustainability of the programme through staff training and regular monitoring and evaluation. In view of the fact that the Public Service of Namibia might take the route of enterprise content management (ECM), and in recognition of the importance of inter-operability of information systems for information sharing, further investigation is required into the electronic information systems running in the public service and possibilities for their integration with an electronic records management system, which the Office of the Prime Minister plans to roll out to the entire public service. Therefore, this study is useful to the current study, in that it assessed e- Readiness based on selected existing IRMT indicators as this study does.

Mnjama and Wamukoya (2007) conducted a study on e-Government and records management: an assessment tool for e-Records readiness in government. In their study they indicated that with the proliferation of ICT, e-Records are being created in the public sector, which caused challenges to management of such records by registry staff. The study adopted a qualitative approach where data was collected through literature review on records management, ICT and e-Governance. In addition, the study also looks at challenges faced by registry staff in developing countries. The study revealed that developing countries have paper-based records management systems, while e-Records management is scarce.

The key recommends establishing an e-Record-setting tool to help countries, particularly in Africa assess their readiness for the adoption of e-Records in an e-Government environment. The tool provided twenty-one questions, which would be the criteria for assessing the government's readiness to manage e-Records in support of e-Government.

Moloi (2006) investigates the management of e-records in a government setting in Botswana. A two-stage research design strategy involving a case study of government ministries and a survey of the respondents within government ministries was used. The population of the study consisted of: Director, Botswana National Archives and Records Services (BNARS), a representative of the Director, the Department of Information Technology (DIT), records

staff, IT specialists, and action officers. The findings showed that whereas e-Records management in developed countries is receiving great attention, the same cannot be said of Botswana. E-records management within the government of Botswana is at infancy and is fairly new. Botswana lacks an e-Records management policy, which makes it difficult to identify, maintain and preserve e-Records. Key recommendations include the need for the Botswana government to consider among other things, benchmarking against best practices of developed countries with regard to the systematic management of e-Records.

The above studies in developed countries and in Africa all contend and underscore the need for a thorough e-Records readiness as key to the implementation of e-Records management programmes and ultimately e-Government in the public sector. The studies also show that e-Records management strengthens e-Government services by supporting business continuity, accountability and transparency, good governance, and evidence-based decision-making.

3.8 Management of e- Records in the context of e-Government in Swaziland

Literature on the relationship between e-Records and e- Government assert that proper management of e-records is essential to the success of e-Government. Past studies in Swaziland show no research evidence that ascertain the depth of e-Records readiness in the context of the current e-Government strategy.

According to Swaziland National Archives Report (2015) relevant stakeholders do not seem to give sufficient attention to management of e-Records as a critical success factor for e-Government in Swaziland. Though the 2013-2017 Swazi e-Government strategy emphasizes that management of e-Records is a vehicle for national economic and social development since it ensures effectiveness, efficiency, transparency and accountability on the part of the government, the strategy does not highlight whether the government ministries in Swaziland are e-Records ready for the purposes of use in the implementation of e-Government.

Swaziland passed into law the ICT policy in 2007 that allowed for the establishment of the e-Government portal. This e-portal currently allows for the sending of mail between different official departments leading to easy access of information through internet without personnel having to physically move documents.

The SNA (2015) also noted that lack of comprehensive studies in Swaziland on e-Records management has prejudiced the department and its partners in the Ministry of Information Technology, a blue print that can guide them in the implementation of the e-Records project. This has resulted in government ministries adopting an uncoordinated approach in managing e-Records because the ICT Policy and e-Government 2013-2017 strategy are silent about how e-Records management is supposed to be implemented. The Records and Archives Act of 1971 is also obsolete.

Previous related studies have tended to focus on paper-based records management in government ministries in Swaziland, such as the one conducted by Tsabedze (2011). The aim of the study was to investigate records management practices in government ministries in the Kingdom of Swaziland. The study sought to determine how records are generated, used and disposed of in the government ministries; the types of records that are generated within the Swaziland government; how the records are organized and retrieved; the training needs of the Swaziland government's registry staff; the attitude of staff towards records management practices; the level of staff awareness to sound records management practices; the suitability of records storage facilities; and the challenges of e-Records management in the government of Swaziland.

Ginindza (2008) attempted to study the general state of e-Government in government ministries in Swaziland. The goal of the study was to establish the extent to which the Swaziland Government has responded to the challenges and the progress made regarding the priority initiatives pertaining to e-government in Swaziland.

A study conducted by Msibi (2015) investigated the preservation of public records and archives in Swaziland Government Ministries and the Department of Swaziland National Archives. The proper preservation of public records ensures continued access to a nation's documentary heritage. If public records are not properly preserved, efficiency in government is compromised. These results in poor decision making, increased fraudulent behavior and unguided development of operational policies.

Sheridan and Riley's (2006) argue that trying to introduce e-Government when there is no e-Records readiness is as good as wasting money and other valuable resources. Nengomasha (2009) accentuates that when the government embarks on e-Government there tends to be an increase in the use of e-Records as well as an increase in government's reliance on electronic

information. For this reason, both the 2013-2017 e-Government strategy and the ICT Policy are not comprehensive about e-Records management and readiness and the obsolete Records and Archives Act of 1971. According to the Swaziland National Archives Report (2015), records loss is a result of lack of a proper records management system in government ministries. The report points out that there is no co-ordinated e-Records policy or strategy at government level that cuts across and integrates e-Records management in all ministries. The absence of such an infrastructure has resulted in ministries engaging consultants to implement incoherent and uncoordinated individual documents management systems.

The above studies do not highlight whether government ministries in Swaziland are e-Records ready for the purposes of use in the implementation of e-Government. It is not clear whether the e-Government solutions implemented in Swaziland's government ministries take into account the management of e-Records. It is also unclear whether parties interested in records management in Swaziland are involved or represented in e-Government stakeholder committees.

3.10 Empirical studies on e-Records readiness assessments in Africa

Empirical studies show that the majority of African countries are lagging behind in the management of e-Records compared to their counterparts in other parts of the world (Moathodi, 2015; Kalusopa, 2011; Keakopa, 2006; Kemoni, 2008; Moloi, 2006; Mutasa & Mashingaidze, 2005; Wamukoya & Mutula, 2005). The root cause of the problem can be attributed to the 'digital divide' from which Africa suffers, in part due to its tradition of oral-based society (Kayumbe, 2014).

In Zimbabwe, Nkala, Ngulube and Mangena (2012) conducted a study to assess the e-Readiness of the National Archives of Zimbabwe, since the management of e-Records is one area that has challenged archivists and records managers, especially in developing countries. The study also aimed to examine whether the archival institution has the necessary resources for the preservation of e-Records. These archival resources include staff skills and the institutional infrastructure, both of which assist government departments in addressing the problems they face in promoting the archival perspective within government departments. The findings from the study revealed that, while there are departments that are producing e-Records, for example, the Central Vehicle Registry (CVR), the Zimbabwe Revenue Authority

(ZIMRA) and Tourism, NAZ is not performing an active role in managing these e-Records. Therefore there is a need for NAZ to play a proactive role by stipulating the premises in which e-Records can be maintained within the creating departments and the archival institution. Thus, the inclusion of standards that are applied by all creating departments is necessary.

The study further revealed that currently, there is no existing ICT policy, thus the circumstances in which e-Records can be maintained are not clearly laid down. Moreover, the NAZ Act does not clearly spell out what e-Records are. That makes the establishment of the scope of their management somewhat of a challenge. At present, government departments manage e-Records according to the systems which best suit their institutions, which may not necessarily provide for adequate preservation standards. The findings revealed that NAZ does not have adequate infrastructure to cater for e-Records preservation as this would need specialised equipment like servers to cater for the anticipated voluminous deposits of e-Records. The lack of suitable infrastructure, that is, the necessary hardware and software, would compromise the benefits of e-governance. However, it was revealed from the study that NAZ is in the process of formulating an electronic records-keeping system under the Temporary Digital Repository. Unfortunately, at this time, staff members have limited skills and knowledge in managing e-Records, despite the fact that most of them are computer literate.

Nkala, Ngulube and Mangena (2012) recommended that in order to implement a viable e-Government strategy and e-Readiness, there is a need for a legislative and policy framework that facilitates the smooth flow of operations within the e-environment. Thus, there is a need for restructuring the NAZ Act to clearly specify the standards required for proper e-Records management, vis-à-vis simply including them under the vague and ambiguous statement: 'regardless of format'. Lessons learnt from the South African Archives Act reveal the need for such a strategy as the Act clearly stipulates the management of e-Records as the mandate of the archives, and clearly defines the scope and nature of e-Records. This leads to the need for standardisation in the maintenance of e-Records within the creating departments, similar to the standards created for the management of paper records. While most of the staff members at NAZ are computer literate, there is a need for special training to enhance the IT capabilities of employees who are going to be involved directly with the preservation of e-Records, as this is a highly specialised field. Thus, much work remains to be done in order to

effectively and efficiently deliver e-Government services, offer efficient information services and achieve the efficiency and accountability required within the public administration system, thereby strengthening economic performance in an environment which, currently, is not e-Records ready.

In Botswana, Kalusopa (2011) sought to examine e-Record readiness in labour organisations with a view to proposing a framework for labour organisations in Botswana. The study was largely guided by a quantitative paradigm and used a survey research strategy. This was complemented by methodological triangulation of both quantitative and qualitative data collection methods. All the 50 registered labour organisations in Botswana were surveyed, 45 of which responded, representing a response rate of 90%. Data was obtained through structured questionnaires, semi-structured interviews, document review and observations.

The study established that e-Records readiness in labour organisations in Botswana was evident, low and evolving, evidenced by the slow adoption of ICTs; inadequate records management standards and practices; and low integration in the national e-Readiness framework. The study confirmed that most labour organisations had embraced the utilisation of ICTs in their work; exhibited some form of records management function and acknowledged the existence of national policy directives and strategies on e-readiness. However, traditional ICTs mainly the fax and telephone, were more prevalently adopted and used than newer ones such as e-mail and the Internet. The use of social media technology (Web 2.0 - Facebook, YouTube, and Twitter) was yet to be explored. The management of both paper-based and electronic records was not satisfactory and fell short of best recognised records management standards and practice. The integration of labour organisations into national e-readiness initiatives as espoused in key policy proclamations within the context of the pursuance of a holistic knowledge and information society was slow and remained challenging.

Kalusopa (2011) made several recommendations to be considered in assessing e-Readiness of labour organisations. These include determining: a) the extent of how the current ICT policy and legislative framework have attempted to integrate labour organisations in the overall national ICT initiatives, b) the extent of how the use of ICTs in government agencies have been able to support process delivery of quality public services to labour organisations; c) factors that are likely to restrict adoption of access to ICTs in labour organisations, d) current

efforts to integrate labour organisations in the drive for an information society in Botswana e) type of collaborative ICT training programmes available for labour organisations to build competences and capacity for effective social dialogue and f) the role of Botswana National Archives and Records Services (BNARS) in integrating all sectors including labour organisations in the e-Government strategy in Botswana. The study also proposed a framework for examining and understanding e-Records readiness in labour organisations. Even though the study brings the latest findings and recommendations, it does not go in-depth to bring out suggestions on how BNARS could enhance its role in assisting labour organisation entrench e-Records readiness. Additionally, the study does not touch on the National Archives and Records Management System (NARMS) project, which should be a major reference point nationally on e-Records management across all sectors. One would assume that, NARMS as a major national project should have an impact even in labour organisations (Moathodi, 2015).

The study is useful to the current study in that it examines in detail the concept of e-Records readiness and its applicability to the public sector. As IRMT (2004) has observed, the growing use of ICTs in government to deliver programmes brings along proliferation of e-Records, which warrants assessment for capacity to capture and manage these records.

A recent empirical study Moathodi (2015) sought to assess e-Records readiness at the Ministry of Labour and Home Affairs (MLHA) Headquarters within the purview of the implementation of the National Archives and Records Management System (NARMS). The assessment was done using tenets derived from existing IRMT E-Records Readiness Tool. The assessment examined the national legal and policy framework, compliance to policies, standards, tools, procedures and responsibilities for records management, e-Records management products and technologies, resource capacity and training for records management staff, internal awareness of records management programme and the level of management ownership on electronic records management. The study largely adopted a qualitative approach, with a case study research design. Only 20 (74%) of the 26 targeted respondents responded. Respondents comprised of records management staff, action officers (records users) and IT Managers. Data was collected through semi-structured questionnaires, semi-structured interviews, and observations.

The study findings reveal that the level of e-Records readiness at MLHA is average. This is attributed to inadequacy of some key e-Records readiness variables, which negatively affects

the level of e-Records readiness for NARMS. These include: inadequate legal and regulatory framework; average adherence to records management procedures, tools and standards; low awareness among staff of the records management programme and, the national regulatory framework and on the NARMS pilot project; limited space for records management; slow progress in the implementation of NARMS and low capacity building as records management staff. The study also revealed that opportunities for increasing the depth of e-Records readiness exist such as: availability of financial resources for NARMS project; adequate ICT infrastructure and high management commitment on the e-Records Management (NARMS pilot project).

Moatlhodi (2015) recommends improvement of the national legal and policy framework through development of an electronic records policy; development of a records management policy to provide an internal records management framework; regular training for records management staff, especially on e-Records; regular internal records management awareness; and assigning senior management high-level responsibility for organisation-wide records and information management. This study is also useful to the current study as it examines the concept of e-Records readiness and its applicability to government ministries.

In Nigeria, Asogwa (2013) conducted a study on the readiness of three universities in Nigeria to manage their e-Records by assessing the available e- Records framework, infrastructure, facilities and structures. The study population comprised 30 staff members of the Registry Department of three universities in Nigeria. The study used questionnaires, oral interviews and a checklist as a data collection tool. The study revealed that the universities of Nigeria are not ready to manage e-Records due to weak legislative and organizational frameworks. Asogwa (2013) recommended creation of awareness of e-Records management, training of records personnel, adoption of hybrid records management and periodic auditing, provision of sustainable framework and infrastructure, among other things in Nigerian universities. The study shows that with the planning and adoption of various international standards for proper records management, e-Records created using modern technology are likely to be available to Nigerian universities in the future. The study is useful for the current study as it presented simple tools and strategies for assessing readiness before undertaking electronic document management in the digital age.

In conclusion, the literature reviewed points out several challenges affecting management of e-Records such as lack of legal frameworks and policies to manage e-Records; weak institutional frameworks and commitment towards management of electronic records; inadequate skills to manage e-Records; technological obsolescence; lack of appropriate technologies for management of e-Records; insufficient budget for records management units; costs of e-Records management systems; slow adoption of standards and best practices; long-term preservation of electronic records; security of electronic records. The current study attempts to build on these studies to assess e-Records readiness in the context of e-Government strategy in Swaziland, a topic that has not been covered in any of the studies conducted before.

3.11 The need for e-Records readiness assessments in the context of e-Government in Swaziland

The implementation of e-Government and the management of the proliferation of e-Records in recent years have made it imperative that systems are put in place to capture records as evidence of business activities (Kennedy & Schauder, 1998). Since governments are now providing their services online, it is also essential that established e-Records are reliable, authentic, usable, and integrated (ISO 15489-1: 2016).

The literature shows that, governments have acknowledged the close relationship between good governance, records management and expansion of the electronic world. As such, governments have intensified a framework of values, policies, standards, systems and individuals that allow the readiness of e-Records. It has also emerged from the literature that proper records management helps to furnish accurate, timely, and complete information for efficient decision making in the management and operation of the organization. Moreover, effective and efficient e-Records are essential when it comes to evidence in cases of litigation. It has been noted, however, that, though in developed countries such as Britain, Canada, Australia and America e-Records are given priority and standards and proper systems are in place; the same is not happening in developing countries.

The literature reviewed also revealed that most African countries continue to face several challenges in managing records, particularly electronic records. Although most countries in ESARBICA have attempted to put in place some programmes to manage records in general,

there are no known clear strategies initiated either to manage electronic records or have e-Records readiness assessments rigorously carried out (Kalusopa, 2011).

Keakopa (2010:67) in a recent critical appraisal of the management of electronic records in the ESARBICA highlights the persistent limitations from research conducted in the region in providing appropriate solutions for the management of this new format of records. Other earlier discussions such as the one held in Vienna, Austria on 26 August 2004 between some members of Africa Branch of the International Council on Archives International Records Management Trust (IRMT) and the National Archives of England and Wales have also emphasised the need for effective records management in Africa with respect to capacity building in the area of e-Records management. In the same vein, earlier e-readiness assessments undertaken by SADC E-readiness Task Force in 2002 also underscored similar challenges. These include staff competencies, skills and tools needed to manage e-Business processes (Wamukoya & Mutula, 2005).

The literature also revealed that adopting integrated electronic information systems in government and organisation's transactions, e-Records management policy formulation and implementation, establishing more training outlets for records managers and archivists, developing metadata for locating records which will go a long way incorporating ICT's infrastructure in managing electronic records.

There is lack of literature on e-Records readiness in the ESARBICA region as few studies have been conducted. The dearth of literature on e-Records readiness is evidenced by the observation that most empirical studies in Africa and Swaziland in particular, have tended to focus more on paper based records management.

In Swaziland particularly, the need for e-Records readiness assessments in the context of e-Government is necessitated by the fact that the 2013-2017 Swaziland e-Government strategy does not consider the relationship between e-Records readiness and e-Government. With e-Government being implemented in Swaziland government ministries, e-Records that document the ministries transactions and online activities are also being produced. It is therefore important that the ministries ensure that standards are developed and implemented; that appropriate facilities are created and that adequate resources are invested in managing official records in electronic formats. The study assessed in detail the essence of factoring in

e-Records readiness when implementing the national e-Government strategy. This would assist in the conscientisation of policy makers especially those in government ministries and the cabinet on the essence of assessing and ascertaining e-Records readiness for purposes of harmonizing them with the national e-Government strategy. The study also revealed that e-Government strategy should not exist in isolation but it should be supported by or embedded on a robust national ICT policy.

3.12 Summary

This chapter focused on the theoretical framework that guides the study and showed its appropriateness. It went on to review literature sources based on the themes that were derived from the questions and objectives of the study. Themes that are captured in the introduction automatically formed headings and subheadings of the chapter. Literature review revealed that there are a handful of records management models and theories. Through the use of literature, the chapter revealed that approaches to e-Government, approaches to e-Records readiness assessment, and e-Readiness assessment models and tools are imperative, because such approaches can reflect and inform whether e-Records are ready to support e-Government. Such reflections are important to this study, because the study seeks to find out whether e-Records are ready for the purposes of supporting the implementation of the e-Government strategy in Swaziland. Literature on the approaches to e-Records readiness assessments came in handy in the development of the criteria used to assess the e-Records readiness in the government departments during the data collection phase.

The literature review in this chapter also affirms that most studies that have been carried out in the ESARBICA region and beyond focus mostly on e-Records readiness assessment in Africa, while some studies also focus on the management of e-Records in the context of e-Government. In these studies there is less focus on the e-Records readiness in Swaziland; hence this study focuses mostly on the readiness of e-Records in Swaziland in relation to the implementation of the e-Government strategy. According to standards and best practice if the government in Swaziland wants to successfully implement its e-Government strategy it should first of all assess e-Record readiness. This study assessed whether there is a gap between e-readiness and e-Government in Swaziland. The next chapter discusses the methodology of the study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The previous chapter focused on the theoretical framework that guides the study and showed its appropriateness. It went on to review literature sources based on the themes that were derived from the questions and objectives of the study. This chapter provides the rationale for selecting the research strategy adopted in this study and outlines the research methodology that was followed to ensure that its design is appropriate to provide the answer to the research questions and achieve the aim and objectives of the study. Bless & Higson-Smith (2000), Kalusopa (2011), concur that a research methodology is a plan that provides the overall framework for collecting data and also allows the researcher to analyse variables and draw conclusions.

The aim of the study was to assess e-Records readiness in government ministries in Swaziland with a view of conceptualising a framework for the effective management of e-Records as a tool to facilitate and realize e-Government. It addresses the following research questions:

- What is the national legal and policy framework governing management of electronic records in government ministries in Swaziland in the context of e-Government?
- Is there any compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries?
- What e-Records management products and technologies exist in the government ministries?
- Is there resource capacity and training for e-Records management staff in the government ministries?
- Is there any internal awareness of a link between e-Record management with e-Government strategy in the government ministries in Swaziland?
- What is the depth of government wide digital preservation strategy in the government ministries?
- How can e-Records be managed appropriately in the context of e-Government?

This chapter is organised under eleven thematic areas namely: research paradigms; research approaches; research design; study population; sampling procedures; data collection techniques; reliability and validity; methodological triangulation; data processing and

analysis; ethical considerations; and evaluation of the research methodology. Figure 4.1 illustrates the map of the research methodology.

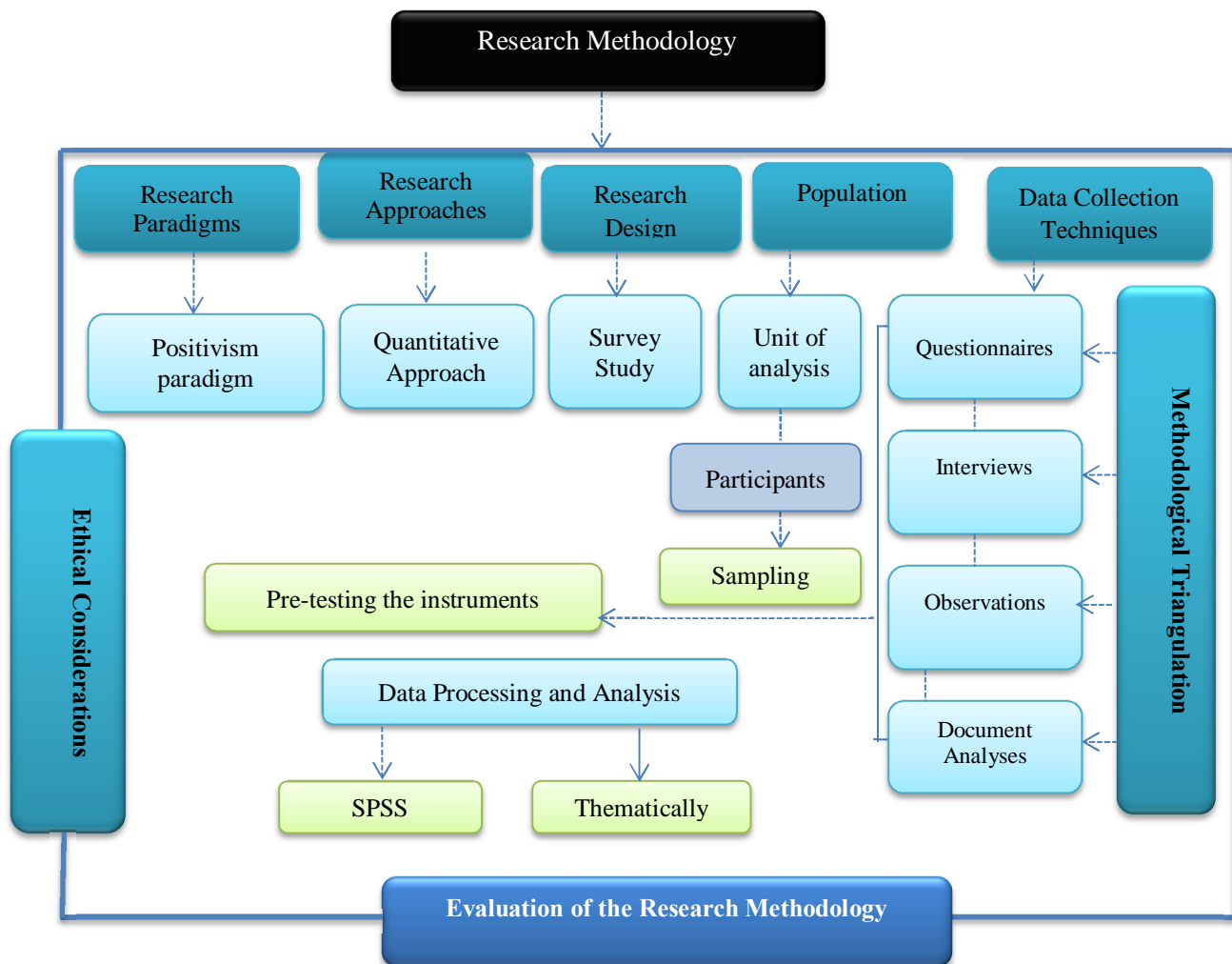


Figure 4.1: The map of the research methodology

4.2 Research paradigms

How do philosophical factors affect the overall arrangements which enable satisfactory outcomes from research activity? Maree (2016) described a paradigm as a set of assumptions or beliefs about fundamental aspects of reality which gives rise to a particular world view.

There are two essential qualities of paradigm:

- Firstly, the paradigm must be sufficiently unprecedented to attract an enduring group away from competing modes of scientific activity; and,
- Secondly, sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to solve (Kuhn, 1962:10).

Different paradigms address fundamental assumptions taken on faith such as beliefs about the nature of reality (ontology), the relationship between knower and known (epistemology) and assumptions about methodologies (Oates, 2006). Ontology and epistemology deal with truth; however axiology is about values and ethics (Mingers, 2003).

There are many debates and arguments among scholars on the progress of philosophy. On this point, Easterby-Smith et al., (2002) point out that it is important to understand each side of the argument because research problems often require compromise designs which draw from more than one tradition. In the social sciences, there are two notable and major research paradigms, namely the positivist and interpretative. The two have guided the styles of reasoning and ultimately shaped specific research methodologies and outcomes.

4.2.1 Interpretive paradigm

The interpretive paradigm, sometimes called social constructionism, attempts to understand and interpret how people create and maintain their social worlds. It is also associated with inductive reasoning. According to Kalusopa (2011) inductive reasoning begins with particular instances and concludes with general statements or principles. It assumes that reality is not objective and exterior, but is socially constructed and given meaning by people. The ontological assumption is that reality and the individual who observes it cannot be separated (Weber, 2004). Interpretive studies generally attempt to understand phenomena through the meanings that people attribute to them.

The purpose of the interpretive paradigm is to improve our understanding of human thought and action through interpretation of human actions in their real life - the epistemological assumption is that knowledge is built through social construction of the world (Klein and Myers, 1999). According to Hassan, (2011) the main focus should be on what people, individually and collectively, are thinking and feeling; attention should be paid to the ways they communicate with each other, whether verbally or non-verbally. In relation to validity in interpretive research, interpretivists are concerned that their claims about the knowledge they have acquired via their research are defensible.

4.2.2 Positivism

Positivism is also referred to as the scientific method. It is based on the view that science is the only foundation of true knowledge. It holds that the methods, techniques and procedures used in natural science offer the best framework for investigating the social world. Positivism applies the scientific method to the study of human action. The key idea of positivism is that the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition (Easterby-Smith et al., 2002).

In relation to ontology, positivists believe that reality is separate from the individual who observes it. They apparently consider subject (the researcher) and object (the phenomena in the world that they focus on) to be two separate, independent things (Weber, 2004). Positivism is associated with deductive reasoning which is usually linked to hypothesis testing. In deductive reasoning, an argument moves from the general principles to particular instances (William, Burstein & McKemish, 2000). Positivists also have an epistemological assumption that knowledge of reality exists beyond the human mind. They apparently believe that human experience of the world reflects an objective, independent reality and that this reality provides the foundation of human knowledge (Klein and Myers, 1999; Weber, 2004).

According to Hjørland (2005) there are two main reasons why positivism is so important in library and records management studies. It is also important how library and information researchers approach their objects of research (e.g. by preferring quantitative and qualitative research methods) and are also important for how those objects themselves are constituted. This current study sought to assess e-Records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government.

The aim in this study (as indicated in section 1.5.2) is to elicit quantitative data. The current study to a large extent adopts the positivism paradigm because this is an appropriate approach for a social science study in records management such as this one which deals with quantitative data on a large scale. However, to complement this perspective, interpretive paradigm is also used as well to explain captured quantitative data.

4.3 Research approaches

A research approach is a discipline within which knowledge is acquired by different research methods. Research scholars have identified two major methodologies that have dominated the social research scene (Creswell 2006; Edmonds & Kennedy, 2013; Lapan, Quartaroli & Riemer, 2012). These approaches are the qualitative approach and the quantitative approach. Each of these approaches (qualitative and quantitative) has been linked to one of the meta-theoretical traditions. For example, the quantitative approach invokes a positivist perspective and includes true experiments, quasi-experiments, correlation and survey studies (Creswell, 2003). The qualitative approach on the other hand involves studies that emphasize on phenomenology or interpretivism from the perspective of insiders (Mangan, Lalwani & Gardner, 2004). Research scholars have, however, in recent times also advocated for a third emerging research approach called the mixed methods research (MMR) that invokes a pragmatic combination of both qualitative and quantitative approaches (Creswell 2006).

Table 4.1 draws comparisons and differences of key features of qualitative and quantitative approaches to research.

Table 4.1: Comparison and differences of features of quantitative and qualitative approaches to research

Quantitative	Qualitative
Objective	Subjective
Deductive (testing of theory)	Inductive (generation of theory)
Generalisable	Not generalisable
Numbers	Words
Follows a natural science model, particularly positivism	Interpretative

Source: Amaratunga et al (2002)

4.3.1 Qualitative approach

Qualitative research is an inquiry process of understanding where a researcher develops a complex, holistic picture, analyses words, reports detailed views of participants, and conducts the study in a natural setting (Creswell, 2015). Qualitative research is a subjective approach which includes examining and reflecting on perceptions in order to gain an understanding of social and human activities. A study that employs the qualitative approach would be a study in anthropology in which the researcher goes out into the field where the individuals live, gather stories and writes a persuasive, literary account of their experiences (Maree, 2016).

Qualitative research involves the use of qualitative data such as in-depth interviews, document and participant observation to understand and explain social and cultural phenomena (Creswell 2006). It often focuses on viewing the experiences from the perspective of those involved. It involves analysis of data such as words (from interviews), pictures (from video), or objects (from an artefact) (Mouton & Marais, 1989). It is also perceived to be any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification. In qualitative research, the researcher often approaches reality from a constructivist position, which allows for multiple meanings of individual experiences (Denzin & Lincoln, 2005).

Glesne & Peshkin, (1992); Golafshani, (2003); Hoepfl, (1999), note the following important points about qualitative research approaches as:

- (1) Emphasizing an understanding of a phenomenon in a naturalistic or context-specific environment (Golafshani, 2003; Hoepfl, 1999);
- (2) Reliability and validity are conceptualized as trustworthiness, rigour and quality through triangulation (Golafshani, 2003:604);
- (3) Increased involvement of researchers in the research process rather than dissociation guided by the question of objectivity (Golafshani, 2003:604); and
- (4) Analysis of results enjoys the compatibility of research methods such as interviews and observations with the reward of using both numbers and words (Glesne & Peshkin, 1992:8).

4.3.2 Quantitative approach

Quantitative research methods were originally developed in the natural sciences to study natural phenomena. Quantitative approach primarily yields statistical data using strategies of inquiry such as experiments and surveys (Creswell, 2003). A research study that employs a quantitative approach would be an experiment or a survey study. To develop knowledge, a researcher relies on a post positivist approach to knowledge, which implies the existence of an objective reality (Teddlie & Tashakkori, 2009). The quantitative researcher tests the theories about reality, looks for probable cause and effect, and uses quantitative measures to gather data to test hypothesis or answer research questions (Maree, 2016). The researcher relates the variables to determine the magnitude and frequency of relationships.

Quantitative research mainly involves the use of structured questionnaires in which the response options are pre-coded and a large number of respondents are involved. Silverman (2010:13) noted that the quantitative research approach obtains data which is statistically relevant and are usually used to answer questions such as how many, where from and how much amongst other questions. A typical characteristic of quantitative research is the use of a controlled environment, where the researcher has both the environment and the experimental conditions under control, and is detached so that the influence is minimised on the research findings (Robson, 2002). This highlights an important feature of quantitative techniques, which is that the process of data collection is distinct from the analysis (Easterby-Smith et al., 2002). Examples of quantitative methods include survey methods, laboratory experiments, formal methods and numerical methods such as mathematical modelling (Myers and Avison, 2002).

There are, however, strengths and limitations of both approaches to research. Table 4.2 outlines these strengths and weaknesses of qualitative and quantitative research.

Table 4.2 Strengths and weaknesses of qualitative and quantitative approaches

Paradigm	Strengths	Weaknesses
Qualitative	<ul style="list-style-type: none"> • Data-gathering methods are seen more as natural than artificial • Ability to look at change processes over time • Ability to understand people-s meaning • Ability to adjust to new issues and ideas as they emerge • Contribute to theory generation 	<ul style="list-style-type: none"> • Data collection can be tedious and they require more resources • Analysis and interpretation of data may be more difficult • Harder to control the pace, progress and end-points of research process • Policy makers may give low credibility to results from the qualitative approach.
Quantitative	<ul style="list-style-type: none"> • Provide wide coverage of the range of situations • Fast and economical • Where statistics are aggregated from large samples, they may be of considerable relevance to policy decisions 	<ul style="list-style-type: none"> • The methods used tend to be rather inflexible and artificial • They are not very effective in understanding processes or the significance that people attach to actions • They are not very helpful in generating theories • Because they focus on what is, or what has been recently, they make it difficult for policy makers to infer what changes and actions should take place in future

Source: Amaratunga et al (2002)

4.3.3 Mixed method research

Currently, there is now a built consensus that the mixed methods approaches have come of age (Creswell, (2003:4). It is already considered the third research approach, along with the quantitative and qualitative approaches, and has its own emerging world view, vocabulary, and techniques (e.g., Creswell & Plano Clark, 2011 & Tashakkori & Teddlie, 2010).

According to Creswell & Plano Clark (2011), MMR is a procedure for collecting, analyzing and combining (or mixing) both quantitative and qualitative data at some stage of the research process within a single study or a series of studies to understand a research problem better.

Meanwhile, Leech & Onwuegbuzie (2009:273) defined MMR as

those designs that integrate quantitative and qualitative approaches in a single study or a multi-phased study, comprising the following five specific designs: sequential studies, parallel/ simultaneous studies, equivalent status designs, dominant-less dominant designs, and designs with multilevel use of approaches wherein researchers utilize different techniques at different levels of data aggregation.

It has been used as a distinct approach in the social and behavioral sciences for more than three decades. MMR is still generating discussions and debates about its definition, the methods involved, and the standards for its quality. Although still evolving, MMR has become an established approach. Several scholars have contributed significantly in shaping and augmenting it as an alternative and credible construct in the social science (e.g., Creswell & Plano Clark, 2011; Greene, 2007; Johnson & Christensen 2008; Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori 2009); and in library and information science (LIS) (e.g., Fidel, 2008; Ngulube, Mukwatlo & Ndwandwe, 2009; Ngulube, 2010).

Ngulube (2010:254) defined mixed methods as one that involves:

collecting, analysing, integrating and interpreting qualitative and quantitative data concurrently or sequentially in a single study or a series of studies investigating the same problem irrespective of which research methodology is dominant in order to exploit the benefits of combining them and to enhance the validity of the findings.

Truscott et al., (2010) maintain that just using quantitative and qualitative methods designs in the same study does not improve research without careful combination, justification, and explanation. MMR is purposeful and more than the result of mixing quantitative and qualitative approaches. The objective for combining quantitative and qualitative research (mixed method) designs is to preserve the strengths and reduce the weaknesses in both quantitative and qualitative designs (Caruth, 2013:113; Creswell, 2012).

This approach has been used in other similar studies such as Maseh (2015:82) in a study titled "Records Management Readiness for Open Government in the Kenyan Judiciary". The researcher used the MMR for his research for three main reasons: a) to seek convergence and corroboration of findings through the use of more than one method of gathering and analyzing data about records management practices in the judiciary and its impact on open government therefore eliminating the inherent biases associated with using only one method b) MMR allowed the researcher to gain broader perspective as a result of using the different methods as opposed to using the predominant method alone; c) results from one methodology are enhanced by the results from the other methodology. In this case qualitative data from the registrars and records officers were in some cases enhanced by quantitative data from the judges and magistrates. Lastly, MMR allowed the researcher to study different groups or levels.

The aim of this study was to assess e-Records readiness in government ministries in Swaziland with a view of conceptualising a framework for the effective management of e-Records as a tool to facilitate and realize e-Government. To assess the current e-Records readiness in the government ministries requires among other things, benchmarking the management records to "best practice" indicators and adopting international standards and practices. Assessing e-Records readiness requires answering the questions, "what", "how" and "why". Therefore the current study rests on the continuum of the two approaches (quantitative and qualitative) as explained in the following sections. The study adopts a methodological triangulation of questionnaires with qualitative data collected through interviews, observations and document review. This shed light on the phenomenon under study. The current study does not qualify to be a MMR because the mixing was minimal and does not cover all the stages of the research processes.

As observed by Kalusopa (2011), scholars such as Ngulube, Ndwandwe and Mokwatlo (2009:107) have put forward a clear description that constitutes three distinctive types of mixed research strategies, namely:

- (i) Sequential strategies: qualitative data is collected and analysed before the quantitative data collection and analysis phase (or vice versa);
- (ii) Concurrent methods: data is collected using both qualitative and quantitative procedures simultaneously (for example, administering a questionnaire which has both closed-ended and open-ended questions; and
- (iii) Transformational techniques: using a theoretical perspective to guide and drive the entire study design.

In view of the above, it is therefore clear that the current study is largely a quantitative study that adopted methodological triangulation of questionnaires with qualitative data collection to deepen the understanding.

4.4 Research design

A research design is a plan or strategy that moves from the underlying philosophical assumption to specifying the selection of participants, the data-gathering methods to be used and the data-analysis to be done (Maree, 2016). According to Bless and Higson-Smith (1995:63), research design can first be understood as the planning of any scientific research from the first to the last step. In a nutshell, research design refers to the research plan or simply how research is planned and executed. The choice of the research design is determined by the researchers' ontological epistemological and axiological perspective, research skills and research practices. All these influence the way in which data is collected (Maree, 2016).

There are various types of research designs, ranging from case studies to surveys, content analyses, empirical designs, phenomenology, etc. The most commonly used research designs for both qualitative and quantitative research are case studies and surveys, and content analyses. Surveys are methods of data collection where information is gathered through interviews or questionnaires. Surveys allow researchers to gain information quickly and require relatively little effort in gathering large amounts of data (Edwards and Talbot, 1994:29). For this study, a survey design was employed, and is discussed in section 4.4.1.

4.4.1 Survey

According to McMillan and Schumacher (2001) and Crowther et al. (1994), survey data are used to describe and explain the status of phenomena, to trace change and to draw comparisons. These authors maintain that the word "design" refers to the degree of control the researcher manages to exert over her or his survey environment. This study utilised survey research design to assess e-Records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government. The survey approach involves the collection of primary data from all or part of a population in order to determine the incidence, distribution, and inter relationships of certain variables within the population (Ngulube, 2005; Tanner, 2000). Regardless of whether the survey makes use of interviews only, questionnaires only, or a combination of the two, the procedures tend to be standardised for all respondents in order to enhance the reliability of the data. A survey involves investigating a large number of people/units geographically spread out over a wide geographical area (Ngoepe, 2012).

Surveys are largely quantitative and have been a widely used method in the records management research. Ambira (2016) utilised survey research in his study to investigate the development of a framework for management of electronic records in support of e-Government in Kenya. Another study by Marutha (2016) also utilised survey research to investigate the development of a framework to embed medical records management into the healthcare service delivery in the Limpopo province of South Africa. Their data collection techniques included questionnaires, interviews, observations and document review. Surveys have the following limitations: a) failure to establish the casual relationship between variables, b) problems of self-reporting, c) increased bias, d) negative effects of sampling techniques, and e) non-response rates (Creswell 2006). However, as observed by others, the attraction of economy in design and rapid turn-around in data collection warrants their use relevant for many studies including this one (Ngulube, 2005:201; Tanner, 2000:83).

The current study employed a survey strategy in order to "describe, compare, contrast, classify, analyse and interpret implications of the findings" on national legal and policy framework; compliance to policies, standards, tools, procedures and responsibilities; e-Records management products and technologies existing; link of e-record management with

e-Government strategy and the status of e-Records readiness in government ministries in Swaziland.

4.5 Study population and justification

According to Neuman, (2003:546), "target population" is the name for the large general group of many cases from which a sample is drawn and which is specified in concrete terms. Bless and Higson óSmith (2000:84) and Rowley (2002:19) describe population as a set of objects whether animate or inanimate which are the focus of the research and about which the researcher wants to determine some characteristics. For example, a set of records, ministries or people could constitute a study population. It is important for researchers to get a clear picture of the population before selecting the sample, thus starting from the top (population) and working down (to the sample) in contrast to working from the bottom up (Singleton & Straits, 2010). Defining a target population, the researcher must specify the criteria for determining which cases are included in the population and which are excluded (Singleton & Straits 2010).

Israel, (1992:201) explains that depending on the size of the population and purpose of the study, a researcher can study the whole universe or a subset of the population, which is referred to as a sample. A study of the entire population is called a census. This study used the census approach because there were only 18 units of analysis that were identified as discussed in the sections that follow. According to Leedy (1997:211) there is little point in sampling populations that are less than 100. Williamson & Bow (2000:72); Ngulube (2005:130); Kalusopa (2011:132) affirm that there is no point in sampling a population of less than 100 units of analysis. The authors observe that there is a common misunderstanding by "novices undertaking survey research" regarding the "concepts population and sample" and point out that "where a population is small for example, a small company of 50 employees, it is feasible to survey all elements of that particular population".

The population for the study was the 19 government ministries of Swaziland, the Swaziland National Archives, Department of Computer Services and the office of e-Government department. The list of the ministries was obtained from the Swaziland government website (2015). The participants were the action officers from the different ministries, registry personnel, the Director of National Archives, the Director of Computer Services and the Director of e-Government.

4.5.1 Director of National Archives

This officer was targeted because she is responsible for designing policies, procedures, guidelines and giving professional guidance to all the Government Ministries and Departments in the country on issues of Records Management. National Archives serve as watchdogs over the creation, maintenance, use, and disposal of records created by government ministries to facilitate efficient administration and the transfer of records of enduring value to the archives repositories where they are preserved for present and future generations (Ngulube, 2004:147).

4.5.2 Director of Department of Computer Services

This officer is responsible for designing and implementing of ICT policies, procedures, guidelines and gives professional guidance to the Government Ministries on issues of ICT infrastructure.

4.5.3 Director of Department of e-Government

This officer is responsible for designing and implementing of e-Government strategy. The department is responsible for rolling out the network infrastructure that will connect all government ministries in Swaziland. This infrastructure establishment is the digitisation of back-office support, which will be carried out through the re-engineering of business processes. Furthermore, this will see the creation of a digitised document management system. The three directors are the key stakeholders in the EDRMS project.

4.5.4 Records officers/ Registry clerk

The records officers/ registry clerks were involved in the study because of their responsibility for records management in Government Ministries and also to understand the functions of the various Departments of the Ministries; the nature of the e-Records each department creates, receives and uses; the frequency of the use of e-Records; and the status of e-Records management in the various departments of the Ministries.

4.4.5 Action officers

These officers are creators and users of the e-Records within Government Ministries and can shed information on training, e-records awareness and awareness of the EDRMS project.

4.6 Sampling procedure

Sampling is related to the selection of a subset of individuals from within a population to estimate the characteristics of the whole population. A sample is a subset from the accessible population being studied (Neuman, 2003: 211). Samples for quantitative research are relatively big compared to those for qualitative research. There are several approaches to determining the sample size. These include using a census for small populations, imitating a sample size of similar studies, using published tables, and applying a formula to calculate a sample size. Each strategy is discussed below.

a) Using a census for small populations

The ideal approach is to use the entire population as the sample. Although cost and time considerations make this impossible for large populations, a census is attractive for small populations (i.e. 200 or less). A census eliminates sampling errors and provides data on all the individuals in the population. In addition, some factors, such as the questionnaire design or developing the sampling frame, are "fixed", i.e. they will be the same for samples of 50 or 200. Finally, virtually the entire population would have to be sampled in small populations to achieve a desirable level of precision (Israel, 1992).

(b) Using a sample size of a similar study

Another approach is to use the same sample size as used in previous studies. Without reviewing the procedures employed in these studies, you may run the risk of repeating errors that were made in determining the sample size for another study. However, a review of the literature in your discipline can provide guidance about the "typical" sample sizes used (Glenn, 1992).

(c) Using published tables

A third way to determine sample size is to rely on published tables that provide the sample size for a given set of criteria. Tables present sample sizes that would be necessary for given combinations of precision, confidence levels, and variability.

(d) Using formulas to calculate a sample size

Although tables can be a useful guide in determining the sample size, you may need to calculate the necessary sample size from a different combination of levels of precision,

confidence, and variability. The fourth approach to determining sample size is the application of a formula (Israel, 1992).

$$n = \frac{Z^2}{2 \left(\frac{Z^2}{N} + e^2 \right)}$$

Where n = desired sample size

N = Population size

e = Margin of error

e = ± 10 %

90 % Confidence level

The values of e=±10% and 90% confidence level were adopted. Consequently, using the Israel formula, the following samples were generated for records/registry staff:

Sample for registry staff

n= N

1+N (e)²

n=40

1+498 (0.10)²

= 83 registry officers →

Every effort was taken to ensure that the sample covered all the management levels at the ministries in order to ensure that the figures would not be biased with respect to records management issues from a specific ministry. These measures were taken in order to provide accurate information. The records/registry staffs were purposely selected (to ensure staff at top, middle and lower management levels was included in the sample). In this technique, sampling units are selected according to the purpose. Purposive sampling provides biased estimates and it is not statistically recognized. This technique can be used only for some specific purposes. From each management level, random sampling was used. The Ministries' organizational structure which lists staff positions was used as the sampling frame.

The Action Officers like their records/registry counterparts were purposively selected taking care to include all three management levels followed by random selection within each management level using the Ministries' organizational structure as the sampling frame. This resulted in 126 Action Officers. The distribution of the Action Officers was as follows: 42 top level management, 42 middle level management, and 42 from lower level management. The Ministries and sampled staff that were included in the study are reflected in Table 4.3.

Table 4.3: Government Ministries and staff included in the study

Unit	Records/registry staff	Action Officers	Directors
Swaziland National Archives			1
Department of Computer Services			1
Department of E-Government			1
Cabinet office	4	6	
Deputy Prime minister office	4	6	
Ministry of Justice	4	6	
Ministry of Labor and Social Welfare	4	6	
Ministry of Public Service	4	6	
Ministry of Tourism	4	6	
Ministry of Works & Transport	4	6	
Ministry Natural Resources	4	6	
Ministry of Education	4	6	
Ministry of Finance	4	6	
Ministry of Housing and Urban Development	4	6	
Ministry of Home Affairs	4	6	
Ministry of Sports, Culture and Youth Affairs	4	6	
Ministry of Health	4	6	
Ministry of Information, Communications and Technology	4	6	
Ministry of Economic Planning	4	6	
Ministry of Commerce	4	6	
Ministry of Tinkhundla	4	6	
Ministry of Foreign Affairs	4	6	
Ministry of Agriculture	4	6	
Total	N= 83	N=126	N= 3

4.7 Data collection techniques

Data collection refers to ways in which the data was collected in the field, to a specified sample or study population (Kalusopa, 2011: 133). Data collection techniques can be

categorized into two, namely qualitative techniques, which captured data in the form of words or pictures and quantitative techniques, which collected data in the form of numbers (Sarantakos 1993:56-57; Newman 2000:33). Bhattacharjee (2012), Oates (2006) Creswell (1994), Patton (2002) and Yin (2003) support the use of more than one data collection method in conducting research, which they refer to as the triangulation technique. By using a variety of sources and resources, the evaluator and observer can build on the strengths of each type of data collection, while minimising the weaknesses of any single approach (Patton, 2002). Data collection techniques used in this study comprises of interviews, questionnaires, observation and document reviews. The data collection instruments are discussed below.

4.7.1 Questionnaire

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Kalusopa, 2011:133). Wimmer and Dominick (2006:130) define a questionnaire as a printed document that contains instructions, questions and statements that are compiled to obtain answers from respondents. Questionnaires are the most widely used data collection tool in surveys (Moore 2000:108; Moser and Kalton, 1979:257; Ngoepe, 2012:105). There are different types of questionnaires. They can either be self-administered questionnaires, on-line questionnaires, postal or mail questionnaires, interviewer-administered questionnaires, telephone questionnaires or interview schedules (Creswell, 2006; Saunders, Lewis and Thornhill, 2003).

Most types of questionnaires are self-administered and are interviewer-administered.. Self-administered questionnaires include online questionnaires, postal questionnaires and delivery and collection questionnaires. On the other hand interviewer-administered questionnaires comprise telephone interviews and structured interviews.

In the current study, questionnaires were used to collect data from registry personnel and action officers to supplement data gathered from interviews with the Director of Swaziland National Archives, the Director of the Department of Computer services and the Director of E-Government Departments. The advantages and disadvantages of questionnaires are well documented in the literature (Creswell, 2006; Bhattacharjee, 2012, Oates, 2008; Kumar, 2005; Mouton, 2001). Some of the advantages of questionnaires are: They

- (a) cover a large group of people in different geographic locations without increased costs.
- (b) Are completed at the leisure of the respondents and since they have a fixed format, they eliminate variation in the questioning process. due to its fixed format.
- (c) easily distributed to a large number of people and they often allow anonymity.

There are also some disadvantages of using questionnaires in research. Kothari (2004), Cooper and Schindler (2001) and Shajahan (2004) note that, although questionnaires seem to be a quick and convenient method of conducting a survey, there are low rates of return of completed questionnaires; in addition, questionnaires are used only when respondents are educated and co-operating. Participants may simply not know the answer to the question through lack of knowledge or because the question is posed in an ambiguous manner. The language and terminology can also be a barrier to the understanding of the questionnaire by the participants.

4.7.1.1 Questionnaire structure

When designing a questionnaire, the researcher must consider the structure of the questions and the format of the response categories that accompany them (Frankfort-Nachmias and Nachmias 1996:253). A questionnaire may be closed ended (structured), open-ended (unstructured) or both (semi-structured). A researcher can decide to use closed (structured) questionnaires, open-ended (unstructured) questionnaires or may use both depending on the purpose and the practical limitations of a research project (Neuman, 2006:287).

4.7.1.2 Open-ended questions

Open-ended questions allow respondents to convey the fine shades of their attitudes to their satisfaction instead of forcing them to choose one of the several statements usually found in closed-ended questions (Luyombya, 2010). In other words they give the respondent complete freedom of response; the respondent provides his or her own answer to the question. When the respondent has freedom to give an individual response, it is deemed to be proper. However, there is a tendency to provide information which does not answer the stipulated research questions or objectives (Mugenda and Mugenda 2003:73). Open-ended questionnaires also enable respondents to answer as much as they wish. They are particularly suitable for investigating complex issues to which simple answers cannot be provided

(Cohen, Manion and Morrison, 2007). It is important to include open ended questions because they cater for the lack of exhaustiveness and bias that might be in closed questions (Oppenheim, 1992:115).

4.7.1.3 Closed questions

Closed questions provide a set of choices from which the respondent has to choose one (or sometimes more than one) response (Maree, 2016). In other words in closed questions the respondent is asked to select an answer from among a list provided by the researcher. Closed questions are suitable in that they can generate frequencies of responses amenable to statistical treatment and analysis (Cohen, Manion and Morrison 2007:321). They are also easy to code as compared to open-ended questions and do not discriminate unduly on the basis of how articulate the respondents are (Leedy & Ormond 2005:183). On the other hand the major weakness of closed-ended questions is that they can create artificial forced choices and rule out unexpected responses (Ngoepe, 2012).

This study employed both closed and open-ended questions. The decision to use open-ended and closed questions was taken in order to reap the benefits of the strengths of both types of questions. The open ended questions covered the *how* and *why*. The closed ended questions were generally constructed with either fixed alternative items, e.g. the participant had to respond by indicating [Yes] or [No] or choose from a Likert scale in terms of items to characterize its features and performance, e.g. a score of 1 for *never*, 2 for *less than once a month*, 3 for *monthly*, 4 for *weekly*, and 5 for *daily*. The questions were used to address the objectives of the study as stipulated under section 1.5.2 (i.e. objectives of the study) of chapter one.

The questions were aimed at collecting data on legal and policy framework; compliance to policies, standards, tools, procedures and responsibilities; e-Records management products and technologies exist; resource capacity and training for e-Records management staff; the depth of government wide digital preservation strategy and internal awareness of link of e-record management with e-Government strategy in the government ministries in Swaziland as per the IRMT components. Respondents were given three weeks to complete the questionnaire. In some instances, questionnaires were used as an interview schedule administered by the researcher.

4.7.1.4 Administering the questionnaire

Administering of the questionnaires is the final stage following the design, pre-test and amendment of the questionnaire (Shajahan, 2004:124). The questionnaires were distributed by hand to the different government ministries in Swaziland. Seven research assistants whose students are doing records management final year at the Institute of Development Management (IDM) were recruited, trained on research ethics and how to deliver questionnaires to the ministries. The students were supervised through consistent follow-ups by the principal researcher to make sure the questionnaires were adequately completed. With regards to the use of questionnaires, Kalusopa (2011:139) & Ngulube (2003: 217) recommend the use of the Tailored Design Method (TDM) for conducting successful self-administered surveys that produce both high-quality information and response rates.

The questionnaires were sent with a covering letter (Appendix E and F), which clearly explained the aim of the study, why it was important for the respondents to take part in the study, and why they had been selected. The letter generally appealed for the respondents' cooperation by assuring confidentiality of the findings. Respondents were assured that all the information provided would be confidential. The distribution of the questionnaire started on the 21 July, 2016 and ended on 5 August, 2016.

4.7.1.5 Response rate to the questionnaires

In any survey research, the response rates are a big concern. Scholars do not agree on what constitutes an adequate response-rate. Babbie and Mouton (2001:261) regard a response rate of 60% as good, 70% very good, 50 % adequate and anything below 50 % is considered to be poor. On the other hand, Cooper and Schindler (2001:314) believe that a 30% response rate is acceptable. The researcher concurs with Babbie and Mouton (2001:261) that the percentage should be moderate. The two scholars caution that the above percentages are estimates; "a demonstrated lack of response bias is far more important than a high response rate" (Babbie and Mouton 2001:261).

The questionnaires were distributed by the research assistants to the participants. Out of the 203 questionnaires, 160 were returned and considered valid for data analysis. This represents a response rate of 79%. which was very good. The response rate of the three interviews was 100%, which is very good.

4.7.2 Interviews

The study used semi- structured interviews to supplement data obtained via questionnaires (see Appendix B,C and D for a list of interview questions). This type of interview is widely used in flexible designs, either as the sole method or in combination with others (Robson, 2002). The reason for this choice is that interviews are the most fundamental of all qualitative methods. They help to generate insights into how respondents see the studied phenomenon. In addition, interviews are considered to be one of the most important sources of the case study data collection (Hassan, 2011). Through this method the researcher can best access the views that respondents have regarding actions and events which have taken or are taking place in the government ministries, along with the views and aspirations (which they have) of themselves and other participants.

The present study used face-to-face collection of data between the researcher and the interviewee (Director of Swaziland National Archives, Director of Department of e-Government and Director of Department of Computer Services). This technique gave the researcher the opportunity to probe deeply to uncover new clues and open up new dimensions of the studied phenomenon (Hassan, 2011). This helps greatly in securing accurate accounts that are based on the interviewees' personal experiences. Easterby-Smith et al. (2002) confirm that the semi-structured interview is an appropriate method when it is necessary to understand the constructs that the interviewee uses as a basis for his/her opinions and beliefs about a particular situation.

4.7.2.1 Administering interviews

In the present study, follow-up interviews were conducted with the Director of Swaziland National Archives, the Director of Department of e-Government and the Director of Department of Computer Services to verify the data collected from the action officers and registry staff. The first interview was conducted with the Director of the Swaziland National Archives who is responsible for designing of policies, procedures, guidelines and also gives professional guidance to all the Government Ministries and Departments on issues of Records Management. The second interview was conducted with the Director of the Department of Computer Services who is responsible for designing of policies, procedures, guidelines and gives professional guidance to the Government Ministries on issues of ICT and infrastructure. The last interview was conducted with the Director of Department of e-Government who is

responsible for driving e-Government strategy. The three Directors are the key stakeholders in the EDRMS project.

The interviews were designed in such a way that they addressed the following components of e-Records readiness, according to the e-Records Readiness Tool (International Records Management Trust, 2004:1):

- legal and policy framework governing management of electronic records;
- Compliance with record management policies;
- Tools and procedures for records management;
- Policies and responsibilities for records management;
- E-Records management products and technologies;
- Resource and training for records management;
- Internal awareness of link of e-record management with e-Government strategy and
- Government wide digital preservation strategy.

The researcher informed the interviewees prior to the interviews that the interview would last about 30 to 40 minutes, to enable them to adjust their schedules. The researcher assured the participant from the onset of the interviews of confidentiality. The interview guides for these officers are presented in Appendix B, C and D.

4.7.3 Observations

In the present study, observation was used as another data gathering method. Maree (2016:90) defines observation as a systematic process of recording the behavioural patterns of participants, objects and occurrences without necessarily questioning or communicating with them. Pickard (2007:201) also states that observations are carried out in order to provide evidence of the *where and now* to discover how people behave and interact in particular situations. Observation requires the researcher to use his or her ears to listen as well as his or her eyes to see the objects or phenomena under study unlike questionnaires and interviews, which depend on information or data provided by the participants (Gall, Gall and Borg, 2005:135; Payne and Payne 2004:157; Suen and Ary 1989:4). In this technique, the researcher is able to gain a deeper insight into an understanding of the phenomenon under observation.

Observations could either be structured or unstructured. Structured observation is a technique in which the researcher employs explicitly formulated rules for the observation and recording of behaviour (Bryman, 2008). In structured observation, researchers identify predetermined categories of behaviour that they would like to observe. These categories are often distilled from the literature and are developed into check lists or rating systems to record and score predetermined actions or behaviours (Maree, 2016). In the present study, structured observations were used with the aid of a checklist (Appendix G).

On the other hand, unstructured observation does not entail the use of an observation schedule for recording of behaviour. Instead, the aim is to record in as much detail as possible the behaviour of participants with the aim of developing a narrative account of that behaviour (Bryman, 2008).

There are advantages and disadvantages in using observation data collection technique. Robson (2002) cites the following as some of the advantages of observation:

- Collect data where and when an event or activity is occurring;
- Does not rely on people's willingness or ability to provide information; and
- Allows you to directly see what people do rather than relying on what people say they did.

On the other hand, the disadvantages of observation include:

- Susceptible to observer bias;
- Susceptible to the Hawthorne effect, that is, people usually perform better when they know they are being observed, although indirect observation may decrease this problem;
- Does not increase the researcher's understanding of why people behave as they do; and
- Can be expensive and time-consuming compared to other data collection methods.

In this study, direct observation facilitated the collection of data from the government ministries. The observational categories that were employed included ICT infrastructure for e-Records or facilities and resources used in the management of information and records of all the government ministries. This included equipment such as PCs, laptops, document

scanners and barcode scanners used for the creation, storage, processing and handling of records including disaster preparedness (disaster prevention, response and recovery facilities) in all ministries concerned. The researcher also observed how e-Records are stored, the types of software that are used, how the ministries use them and how they manage their records in accordance with best practices. The following records management issues were also captured: procedures/systems used for managing records, tools for accessing and tracking records use, filing systems used storage equipment for paper records and storage space. Others were records preservation measures, records security measures and the existence of ICTs in the ministries. Overall, the observations were used to complement data obtained from questionnaires and interviews. A copy of the observation schedule (see Appendix G) was used for each ministry and all the observed data was recorded on the schedule.

4.7.4 Document review and analysis

Documentary review is another source of data collection that was used to complement the use of questionnaires, interviews, and observations. Documentary review refers to the study of documents that detail procedures, policies, acts and standards as requirements for proper functioning of an organisation (Kalusopa, 2011). According to Saunders et.al (2012) the following are possible documentary data sources: text materials such as notices, correspondence (including emails), minutes of meetings, reports to shareholders, diaries, transcripts of speeches and conversations, administrative and public records, books, journal and magazine articles and newspapers.

For this study, the documentary review was meant to complement research questions number 1, 2, 4 and 6. Therefore, documents that were reviewed by the current study included:

- E-Government strategy;
- ICT policy;
- Records Management policy;
- Records Management procedure manual;
- Records Management tools including registers;
- Swaziland National Archives Act No.5 of 1971;
- Records officers job descriptions;
- Vital records protection procedures, including recovery in the event of disaster;
- Functional Classification Scheme and Retention schedules; and

- Documentation on records destruction and vital records inventory; and
- Computer/electronic systems documentation.

Similar studies have also used documentary reviews. For example, Kalusopa (2011) on a study on developing an e-Records readiness framework for labour organisation in Botswana used document review to collect data. Among documents reviewed were Records management procedures, Classification schemes, Records management tools including registers, Records keeping manuals among others. Similarly, Maseh (2015) in a study on Records Management Readiness for Open Government in the Kenyan Judiciary used document review to collect data.

4.8 Reliability and validity of the instrument

Reliability and validity are concepts that have evolved and are rooted in positivist tradition, quantitative research (Kalusopa, 2011:144). Both reliability and validity are measures of research quality and are taken seriously by all researchers who wish others to accept their research as credible (Maseh, 2015). An assessment of the data hinges upon determining the reliability and validity of the research instruments used. Cohen, Manion and Morrison (2000: 106) caution researchers against threats to validity and reliability which can never be eliminated completely. The authors suggest what can be done during design, data gathering, data analysis and data reporting, to try and minimise the threats.

Some scholars assert that the same standards of validity (i.e., the extent to which a measurement measures what it purports to measure) and reliability (i.e., the extent to which a measurement procedure yields the same answer every time it is carried out) which apply to quantitative research, should apply to qualitative research (Lowery and Evans, 2004).

4.8.1 Reliability

A study is said be reliable if the same instrument used in conducting the study is administered to different respondents from the same population, at a different time and the findings are the same (Maree, 2016: 238). Similarly, Ngoepe (2012) views reliability based on the extent to which a variable or set of variables is consistent in what it is intended to measure. In other words, reliability is the extent to which a measuring instrument is replicated and the findings consistent. Maree (2016) identifies four types of reliability as follows:

4.8.1.1 Test-retest reliability

This type of reliability of an instrument is determined by administering the instrument to the same respondents on two (or more) occasions. The first set of scores is then compared with the second set by calculating a correlation coefficient. Such a coefficient will take on a value close to zero if the instrument has low reliability, and close to one if it has high reliability.

4.8.1.2 Equivalent form reliability

A measure of this type of reliability is obtained by administering the instrument and then, on a second occasion, administering an equivalent instrument measuring the same construct to the same respondents. Comparing the two sets of scores by means of correlation coefficient gives the degree of this type of reliability of the instrument. Since the different instrument is used on the second occasion, the possibility of the memory effect problem is eliminated.

4.8.1.3 Split- half or split- halves reliability

The items that make up the instrument are divided in two, forming two separate instruments. To divide the items, three methods are commonly used namely. In the first the even-numbered items form the one instrument and odd numbered items the other. The items are randomly assigned to the two instruments. In the second tool, the first half of the items form the one instrument and the second half the other.

4.8.1.4 Internal reliability/ internal consistency

When a number of items are formulated to measure a certain construct, there should be a high degree of similarity among them since they are supposed to measure one common construct. A measure of this degree of similarity is an indication of the internal consistency (or reliability) of the instrument.

4.8.2 Validity

Bryman (2008) defines validity according to the issue of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. Basically validity refers to the extent to which it measures what it is supposed to measure. Maree (2016) and Krishnaswami & Ranganathan (2010) identify the following types of validity: content validity (face validity and sampling validity); predictive validity (criterion related) and construct validity. Maree (2016) notes that face validity is the extent to which an instrument

looks valid. In other words, does the instrument appear to measure what it is supposed to measure? Content validity refers to the extent the measurement device (questions in the questionnaire), provides adequate coverage of the investigative questions (Saunders *et al.*, 2012). Construct validity on the other hand is needed for standardisation and has to do with how well the construct covered by the instrument is measured by different groups of related items while predictive validity is concerned with the ability of the measures to make accurate predictions.

In this study, various methods were used to ensure that the validity and reliability of the findings were achieved. These were pre-testing of data collection instruments and methodological triangulation as discussed in sections 4.9 and 4.10 below.

4.9 Pre-testing the instruments

Pre-testing the questionnaire or interview schedule is one of the tools that may be used for content validation (Ngulube 2005:136). Pre-testing offers certain advantages beyond helping the researcher to refine the data collection instrument. It can also permit a preliminary testing of the hypothesis, point out a variety of problems not anticipated relating to design and methodology, facilitate a practice run of the statistical procedures to be used, and perhaps even indicate that the final study may not produce any meaningful results and therefore should be rethought or abandoned (Visser, Krosnick and Lavraks, 2000:241).

In this context, for quantitative data, the questionnaire was pre-tested (see appendix A for the cover letter). The pre-test of the questionnaire was conducted between July and August 2016. Fifteen respondents were asked to participate. They were drawn from Swaziland National Archives, the Department of Computer Services, Swaziland government ministries and the Institute of Development Management (IDM). Participants were selected on the basis of their ability to provide professional opinions concerning the instruments. Most respondents, that is 13 (87%) out of 15, expressed their willingness to participate in the exercise, while 2 (13%) declined, citing pressure at their work place.

Those who accepted to be involved in the pre-testing exercise included two Swaziland National Archives personnel, six records officers from Swaziland Government Ministries, three Information technology officers from the Department of computer services and two

senior consultants/ lectures of Archives and Records Management from the Institute of Development.

Based on the pre-test exercise and in consultation with the supervisor, some questions were refined and final questionnaires were produced. Overall, the results of the pre-test indicated that the instruments adequately and comprehensively addressed the objectives of the study and thus provided the confidence to commence data collection.

In addition, qualitative data was collected through semi-structured interviews with one officer from Swaziland National Archives and one officer from the Department of Computer services. The target for these interviews was those individuals that dealt with ICT and records management in the government ministries. Most of the interviews lasted for about one to one and half hours. Questions were largely open-ended (with desirable e- records readiness in the context of e- government strategy in Swaziland) to probe on issues that required further illumination. This is because while some e-Records readiness indicators required some brief answers, it was also found desirable to let information on this aspect (of e-Records readiness in the context of e-Government strategy in Swaziland emerge) based on the records information management theoretical framework adopted in the study. This demonstrated robustness of interviews in the ministries. Accordingly, to further enhance the trustworthiness and confidence of the results, other data collection methods such as observation and document review were used.

4.10 Methodological triangulation

Triangulation is critical in facilitating interpretive validity (Terre Blanche & Durrheim, 2004) and establishing data trustworthiness (McMillan & Schmacher, 2001) and could require researchers to check the extent to which conclusions based on qualitative sources are supported by a quantitative perspective, and vice versa. It reduces the risk of chance associations and systematic bias, and relies on information collected from diverse range of individuals, teams and settings, using a variety of methods (Maxwell, 1996:93). Independent measures of the same phenomena should be similar (Swanson & Holton, 1987:105). This implies that data pertaining to, for example, E1 collected by means of one ó on- one interviews as well as by a psychometric instrument should correlate positively. However, if this does not occur, a deeper qualitative analysis (unbound by predefined variables) should be conducted in order to gain a deeper understanding of difference(s) (Maree, 2016). Joubert

(2005) maintains that the richness of data collected during a study will become apparent only when analysed from an integrative perspective. Data and information obtained should result in something new.

According to Patton (2002) there are four types of triangulation:

- (a) Data triangulation: the use of more than one method of data collection instrument (e.g. questionnaires, interviews, observations and document reviews);
- (b) Investigator triangulation: involves use of multiple researchers rather than single observers in an investigation.
- (c) Methodological triangulation: combining quantitative and qualitative approaches; and
- (d) Theory triangulation: involves using multiple theories or perspectives in the interpretation of the phenomenon.

The study adopted methodological triangulation of both quantitative and qualitative data collection methods. In that regard, a triangulation of questionnaires, interviews, observations and documents review were used to collect data from the Director of Swaziland National Archives, the Director of Computer Services, the Director of the e-Government Department, Records officers and Action officers. In some instances all the groups were asked similar questions for instance questions on records management policies and e-Government strategy (see Appendices B, C, D, E and F). Responses from respondents were compared and the response with the highest frequency from all the respondents was taken to be the true reflection of the matter at hand. Triangulation was therefore helpful in overcoming limitations and weaknesses of different quantitative and qualitative data collection used in the study. The use of triangulation thus enabled one method to complement limitations and weaknesses of the other research techniques, and this enhanced the validity and reliability of the research results presented and discussed in Chapters 5 and 6.

4.11 Data processing and analysis

Data processing and analysis refers to how data collected from the field is classified and interpreted. Mouton (1996:161) and Sapsford and Jupp (1996:228) affirm that data analysis involves reducing to manageable proportions the wealth of data that has been collected or has become available. Identifying patterns and themes in the data and analysing the data involves both qualitative analysis, which includes processes such as thematic and content analysis and

quantitative or statistical analysis. The purpose of using both quantitative and qualitative data analysis is to organize, provide structure to and elicit meaning from research data (Polit and Beck, 2004:586).

In the current study, data were collected using both quantitative and qualitative approaches to complement each other. The weaknesses of one approach could be covered by the strengths of the other and vice versa as explained in section 4.7.

4.11.1 Quantitative data analysis

Quantitative data analysis includes statistical distributions, construction of diagrams and calculation of simple dispersion, percentages and correlation coefficients and creation of simple tables or diagrams that show the frequency of occurrences (Gall and Borg, 2005:157). In the current study, quantitative data (data collected using questionnaires) was edited, coded and analysed through the use of the computer software programme (SPSS version 21). SPSS is a computer software program that enables the input of raw data, modification and re-organisation of data to carry out a wide range of simple, statistical analyses (Blaxter, Hughes and Tight 2006). Though there are many academically available software packages for the analysis and presentation of data, like Microsoft Excel®, EPI- info® and SAS® (Statistical Analysis System), SPSS® is the most widely used statistical software in the academic community (Arksey & Knight, 1999:156; Foster, 1998:22; Moore, 2000:136; Slater, 1990:82).

According to Kothari (2004:122) editing is done to make sure that data collected is accurate, consistent with other facts gathered, uniformly entered, as complete as possible and arranged to facilitate coding and tabulation. Coding on the other hand is a process of reading carefully through your transcribed data, line by line, and dividing it into meaningful analytical units (Maree, 2016:116). Coding therefore can be defined as marking the segments of data with symbols, descriptive words or unique identifying names.

In the present study a code was assigned to each category or variable that contains an idea or a piece of information that relates to an item from the questionnaire, for example officers: registry = 1 and action = 2. Responses to the open-ended questions were scanned to determine common words and phrases were used by the respondents. The Statistical Package

for the Social Sciences (SPSS), version 21 for Windows, was used to present and analyze the data. SPSS® facilitated the sorting of data and computing of frequencies, sums, means, percentages, standard deviations and exploring similarities and differences among the variables. Tables, pie charts, percentages and graphs were used to present the responses of the respondents.

4.11.2 Qualitative analysis

Qualitative data (data collected using the interviews, observation and document reviews) were analysed thematically. The information obtained from each data collection tool (interview, observation and document reviews) was analysed separately where each data collection tool was first broken down into themes. According to Meseh (2015) this involves attaching data labels to the raw data, categorizing the codes which involved identifying ways in which the codes could be grouped into categories, identifying themes and relationships among the codes and categories where patterns within the data begun to unfold, and developing concepts and arriving at some generalized statements which meant drawing conclusions based on the relationships, patterns and themes that emerged from the data.

The IRMT e-Records readiness tool was used to provide guidance on the corresponding recommendations associated with each thematic area. In this study, data collected using the interviews, observation and document reviews were first coded and categorised into themes for easy interpretation, since analysis and interpretation are closely interlinked in qualitative methods (Leedy and Ormond, 2005).

The analysed qualitative data was organised and presented according to the research questions, to bring together all the relevant data that pertains to e-Records readiness in the context of e-Government strategy in Swaziland. The presentation of qualitative data involved the discussions of themes and, categories and in some instances, interviews were reported verbatim. The responses from quantitative (data collected using questionnaires) were validated with qualitative (data collected through interviews, observations and document review) to produce a single interpretation and then conclusions were drawn.

4.12 Ethical considerations

There are several ethical issues that must be considered in research when designing social research (Babbie, 2008:68; Bailey, 1994:472; Babbie, 2001:471; Saunders et al., 2009: 150). These include privacy of possible and actual participants; consent and possible deception of participants; voluntary nature of participation and the right to withdraw partially or completely from the process; reactions of participants to the way in which one seeks to collect data, including embarrassment, stress, discomfort, pain and harm; maintenance of the confidentiality of data provided by individuals or identifiable participants and their anonymity; behaviour and objectivity of the researcher and lastly effects on participants of the way in which the data is used, analysed and reported. Marees (2016) concurs that participation should be voluntary and that no harm must come to the participants; that there should be informed consent and the participants should be assured of anonymity and confidentiality.

The current study adhered to ethical guidelines for the University of Zululand code of research ethics which is guided by the following principles: fairness and equity for the respondents, honesty and integrity, safe and responsible methods as described in Chapter One, Section 1.10 (ethical issues).

In line with the Government of Swaziland's research policy, the researcher applied for a research permit to conduct the research from the Swaziland National Archives and permission was granted (see Appendix J). The cover letter and letter of authorization explained to the respondents the objectives and significance of the study to Swaziland's government in order to obtain their consent. The respondents were then assured that their privacy, confidentiality and anonymity would be observed and that the information collected would be used purely for academic research work. Respondents were asked to sign the informed consent (see Appendix I) which explains that participating in the study is voluntary and that there is no monetary gain for participating. They were also informed that they had a right to withdraw from the study at any time without victimization. During data presentation and analysis, respondents were referred to by use of codes for example, registry officer =1 and Action officer =2 to ensure confidentiality. Participants' details were not revealed to the third parties. All sources used in the study were acknowledged so as to avoid plagiarism.

As an academic requirement at UNIZULU, scholars are encouraged to disseminate their research findings through an article in a journal, chapter in a book presentation at conference, seminar or workshops. In this context, the researcher, together with the supervisor, prepared a paper on the findings for presentation at the 17th Information Studies (IS) Annual conference in September 2016 and XXIVTH ESARBICA conference in August 2017. The researcher has also submitted a journal article to African Journal of Library, Archives and Information Science and a book chapter to Diverse Applications and Transferability of Maturity Models.

4.13 Evaluation of the research methodology

This section evaluates the research methodology that was used in carrying out the current study. Ngulube (2005:139) points out that research method need to be evaluated in order to explain what information was required, how it was collected accurately and how it was presented and analysed. Kalusopa (2011:151) concedes that it is important to evaluate the research methodology in relation to research design, its limitations, and short comings in the execution of the study as well as ethical issues that would have arisen in the process.

Research methods will always have pitfalls and strengths in explaining phenomenon (Kalusopa, 2011). Section 4.2 has discussed the evolution of the three main paradigms that guide research today namely; Qualitative, quantitative and mixed methods. It has therefore been explained in the preceding sections that there is a very wide range of research designs from which a researcher may select one that is congruent with the question and philosophical assumptions as well as which is most appropriate for generating the kind of data required to answer the research question(s) posed (Maree, 2016). There is no one research design that can be said to be the; rather what is key is whether such a design is able to realise the set objectives (Kalusopa, 2011). This current study adopted a survey research design where quantitative data collected is supplemented by interviews, observations and document review, thus bringing further clarity on the phenomenon under study.

Many researchers have cited disadvantages of surveys such as failure to establish the casual relationship between variables; problems of self-reporting that increases bias, effects of sampling techniques, non-response rates, for example, (Kalusopa,2011;Ngulube, 2005; Tanner, 2000). However, as observed by others, the attraction of economy in design and rapid turn-around in data collection warrants their use relevant for many studies including this one (Kalusopa, 2011; Ngulube, 2005; Tanner, 2000).

Chapter One, outlined that this study sought to assess e-Records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government. Among other key issues, what the empirical study intended to do was to establish the national legal and policy framework governing management of electronic records; ascertain the level of compliance to policies, standards, tools, procedures and responsibilities for e-Records management; establish the e-Records management products and technologies existing; examine resource capacity and training for e-Records management staff; find out if there is internal awareness of links between e-Record management and e-Government strategy and establish the depth of government wide digital preservation strategy in Swaziland government ministries. Creswell (2003) explains that a research question starting with a 'how' or 'what' may call for qualitative study, with the findings portraying what is going on. Quantitative research on the other hand asks 'why' and looks for a comparison of groups. The quantitative and qualitative research design adopted for this study is appropriate as the study aimed to answer the question: 'What is the level of e-Records readiness in the context of e-Government strategy in Swaziland government ministries?' The IRMT E-readiness tool which has been adopted by this study was another determining factor when choosing a research design.

The present research employed both quantitative and qualitative approaches to provide a broader, deeper perspective through methodological triangulation, as indicated in section 4.3. Each of these strategies has strengths and weaknesses. For example, while quantitative research is objective, qualitative research is said to be value laden, (Creswell, 1994:4). By combining the two research paradigms, their weaknesses were minimised and their strengths were maximised through triangulation (discussed in section 4.9). Bogdan and Biklen (2006) defined methodological triangulation as a technique that facilitates validation of data through cross verification from more than two sources and can be employed in both quantitative strategy of founding the credibility of qualitative analyses. Terre Blanche & Durrheim (2004) also concur that triangulation is critical in facilitating interpretive validity and establishing data trustworthiness; it requires researchers to check the extent to which conclusions based on qualitative sources are supported by a quantitative perspective, and vice versa. It reduces the risk of chance associations and systematic bias, and relies on information collected from a diverse range of individuals, teams and settings, using a variety of methods (Maxwell, 1996). This current study allowed for the collection of different types of data in that a survey was

utilised to gather largely quantitative data and some qualitative data through a self-administered questionnaire. Then data was further collected through interviews, document analysis and observations in the Swaziland government ministries to understand the e-Records readiness in the context of e- Government strategy in Swaziland.

This allowed for methodological triangulation of data sources. Methods of data collection played a very important role in improving the trustworthiness and dependability of the data collected (reliability and validity) (Denscombe, 2007; Polit and Beck, 2004; Saunders *et al.*, 2012). It can therefore be stated that the current study adopted both quantitative and qualitative research designs to seek reliable and valid results. According to Kalusopa (2011) data that is constant as indicated by the researcher's capability to duplicate the findings is important in the quantitative field, while validity of the qualitative findings is paramount so that data is representative of a true and full picture of the constructs under investigation.

However, the whole research process was marred with challenges. The following were some of the challenges encountered and how they were resolved during the data collection period:

- Some of the action officers seemed not to have the time to fill in the questionnaires. This forced the research assistants to make many visits to the ministries to remind them; only 75 % of the questionnaires were filled.
- Since the researcher was not on any scholarship, finances were another challenge. The many visits that had to be made to the ministries by research assistants financially drained the researcher but every effort was made to ensure successful completion of data collection.

Regardless of all the challenges cited, the researcher crossed these hurdles to ensure that trustworthy data were collected and he is confident that the study findings adequately address the research questions.

4.14 Summary

This chapter discussed the methods and techniques that were used to assess e-Records readiness in the context of e-Government strategy in government ministries in Swaziland. The research process was informed by the quantitative and qualitative research paradigms through survey research design. Reasons for the selection of each instrument for data collection were explained, and principles such as validity, reliability and the ethical standards that informed the research process, were presented. The analysis of data and evaluation of the research methodology were also discussed in the chapter. The results of the assessment are presented and interpreted in the chapters that follow.

CHAPTER FIVE

DATA ANALYSIS AND PRESENTATION OF THE RESULTS

5.1 Introduction

The previous chapter (4) discussed the research methodology that was used in the current study. This chapter presents the findings of the study.

To recap, the aim of the study is to assess e-Records readiness in government ministries in Swaziland with a view of conceptualising a framework for the effective management of e-Records as a tool to facilitate and realize e-Government. The study sought to answer the following research questions:

1. What is the national legal and policy framework governing management of electronic records in government ministries in Swaziland in the context of e-Government?
2. Is there any compliance to policies, standards, tools, procedures and responsibilities for e-Records management in government ministries?
3. What e-Records management products and technologies exist in government ministries?
4. Is there resource capacity and training for e-Records management staff in government ministries?
5. Is there any internal awareness of a link between e-Record management with e-Government strategy in government ministries?
6. What is the depth of government wide digital preservation strategy in the government ministries?
7. How can e-Records be managed appropriately in the context of e-Government?

In the current study, data was gathered through questionnaires with registry officers and action officers. Semi-structured interviews were conducted with the Director of the Swaziland National Archives, the Director of e-Government and the Director of Computer Services. In addition, observation of records management operations was done and documents including the e-Government strategy, the ICT policy, the Records Management policy, the Records Management procedure manual, the Records management tools including registers, the Swaziland National Archives Act No.5 of 1971, Records officers' job descriptions, the Functional Classification Scheme and Retention schedules, documentation on records destruction and vital records inventory, and Computer/electronic systems

documentation were reviewed. The quantitative data gathered through the questionnaires were analysed using SPSS to generate descriptive statistics that this chapter presents in tables, charts and percentages. Data from the interviews, observations and documents reviewed were analysed thematically and are presented in narrative discussions.

5.2 Response rate

Response rate refers to the percentage or number of respondents in the sample who successfully completed an interview and or the questionnaire. The response rate is calculated as the percentage of respondents in a sample who returned completed questionnaires (Nachmias, 1996:226). Different scholars have given their opinion on the acceptable percentage return response rate that should be achieved in a study. Neuman (2000) opines that a response rate below 50% is considered to be poor and over 90% as excellent. On the other hand, Babbie and Mouton (2001) argue that a response rate of 50% is considered adequate for analysis purposes, while 60% and 70% is considered good and very good, respectively.

In a study titled "Records management readiness for open government in the Kenyan judiciary" (Maseh, 2015), 82 questionnaires were administered to judges and magistrates, and 52 were completed, 61 senior judicial officials were targeted for interviews and 46 participated. In another study conducted by Ngoepe (2012) on fostering a framework to embed the records management function into the auditing process in the South African public sector, 171 questionnaires were distributed, and only 94 were returned, representing a 55% response rate. Lastly, in a study on e-Records readiness framework for labour organisations in Botswana (Kalusopa, 2011), out of the 50 questionnaires, 45 were returned representing a response rate of 90%.

The preceding examples show that different studies will obtain different response rates.

The unit analysis of the current study consisted of 212 respondents. One hundred and twenty (120) questionnaires were hand-delivered to Action Officers, 83 to Records/Registry staff. Structured interviews were conducted with the Director of the Department of Computer Services, the Director of Swaziland National Archives and the Director of E- Government. 90 action officers 126 (75%) and 70 (83%) Records/Registry staff out of 83 returned their questionnaires. It is therefore concluded that the response rate for this study is very good. The distribution of the respondents and the response rate is illustrated in the Table 5.1.

Table 5.1: Response rate (N=212)

Respondents	Data collection instrument used	Expected respondent(s)	Actual respondent(s)	Percentage response rate
Action officers	Questionnaire	126	90	75%
Records/ registry staff	Questionnaire	83	70	83%
Director of Swaziland National Archives	Interview	1	1	100%
Director of Computer Services	Interview	1	1	100%
Director of E-government	Interview	1	1	100%
TOTAL		212	163	77%

Table 5.1 above indicates the response rate from two categories, interviewed and questionnaire respondents. The table depicts that 90 (75%) action officers and 70 (83%) records/registry staff returned the questionnaires. Those who did not return the questionnaires reported that they had busy schedules or were tied up with other official responsibilities and could not make time to respond to the questionnaires. Although some of them promised that they would make time to respond after constant reminders by the researcher, they failed to respond. The researcher interviewed three respondents as planned, the Director of Swaziland National Archives, the Director of Computer Services and the Director of e- Government.

5.3 Presentation of the findings of the study

The findings of the study are organized into themes adapted from the questionnaire which is derived from the IRMT e-Records Readiness Tool that provides a mechanism for testing e-Readiness in governments and government agencies, especially in developing countries. The themes are as follows:

- National legal and policy framework; Compliance to Policies, Standards, Procedures, Tools and Responsibilities for Records Management;
- Electronic records management products and technologies;
- Resource capacity and training for records management staff;

- Internal awareness of link of e-Records management with e-Government strategy; and,
- Depth of government wide digital preservation strategy.

The findings from the questionnaires, interviews, document reviews and observations were collated and presented under respective themes as identified above.

5.3.1 National legal and policy framework governing management of e-Records

The International Standard on Records Management ISO 15489-1:2016: General Section 5 requires that an organisation should provide adequate evidence of its compliance with the regulatory environment in the records of its activities. There is need to find out the adequacy of the legal and policy framework for the creation and management of e-Records (IRMT, 2004). Roper and Millar (1999:64) also note that the national legal and policy framework governing management of electronic records are necessary to create a conducive environment for the effective management of e-Records. One of the first critical steps in managing electronic records is to ensure the existence and implementation of national legislative and regulatory framework for records keeping. Therefore the study sought to find the national legal and policy framework governing management of electronic records in government ministries in Swaziland. These consist of statutes, laws, regulations, codes of conduct, best practice guidelines and ethics governing the business environment that relate to records management.

The study revealed that 123 (75%) of the respondents are unaware of Swaziland's National Archives Act no.5 of 1971 as a regulatory tool for records in the different ministries, while 40 (25%) are aware of the Act which includes records officers as depicted in Figure 5.1. The Director of SNA explained that *“There is a National Archives Act No.5 of 1971 which focuses on the manual records but there is a Records Management Bill of 2010, which captures also the e-Records which is still in parliament”*.

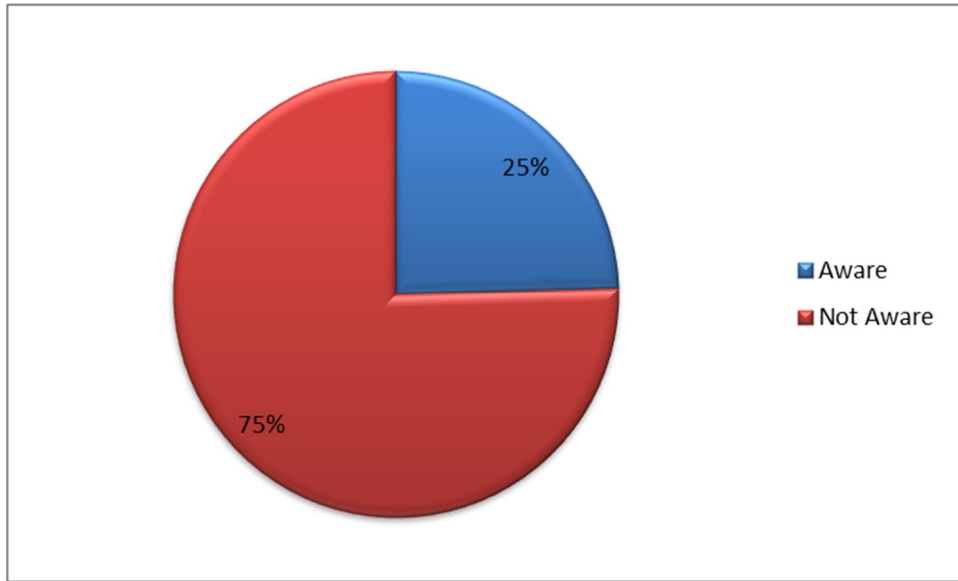


Figure 5.1: National legal and policy framework governing management of e-Records

The study also sought to find out if the respondents 40 (25%) were aware of the contents of the legislation for records management. Figure 5.2 shows that 26(65%) were aware of the contents of the legislation and 14(35%) were not aware of the contents of the legislation. The Director of SNA explained that *“we normally sensitise government officials and registry staff about the content of the legislation but due to manpower shortages, we are not doing it frequently”*

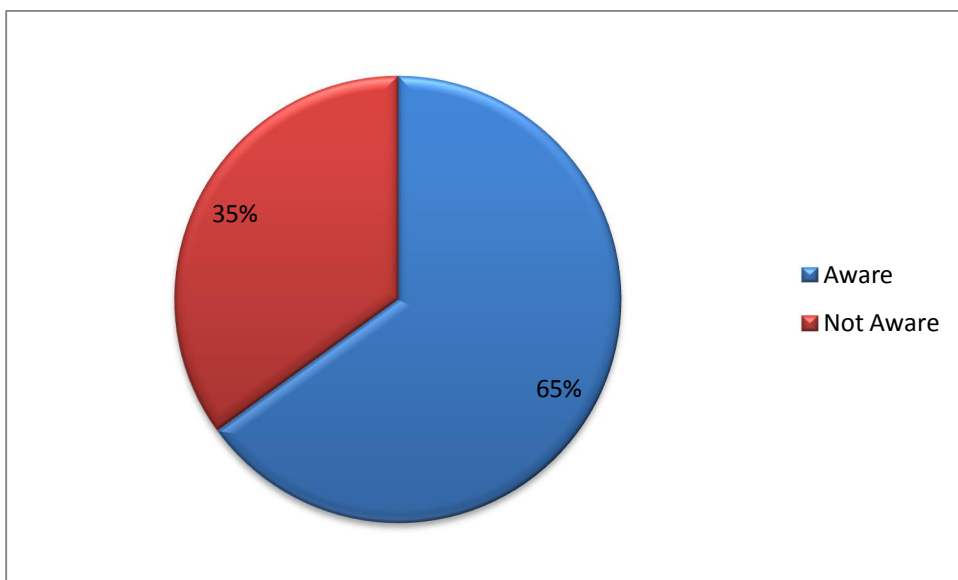


Figure 5.2: Awareness of the contents of the legislation for records management

Although 40 (25%) of the respondents were aware of the national legislation, it is quite concerning to note that there exists no national records management Act to guide the effective management of e-Records. This is despite the fact that the National Archives Act No.5 of 1971 focuses more on the archival stages of the Records Lifecycle, (Swaziland Government, 1971). The study also reveals that there is a National Archives and Records Management Bill of 2010, which captures the total Life Cycle management of all records regardless of media and format which has to be passed into law. The glaring lack of suitable legislative framework, the creation, maintenance, and long-term preservation of and access to e-Records is left to chance. The lack of national legal framework governing management of electronic records is likely to affect their value in terms of management (access) and preservation negatively (Johare, 2001).

5.3.2 Compliance to policies, standards, tools, procedures and responsibilities for e-Records management

This section has been broken into the following items:

- Compliance to policies
- Compliance to standards
- Compliance to procedures and tools
- Responsibilities for e-Records management

5.3.2.1 Compliance to policies

A records management policy is a cornerstone for effective management of records in an institution as it provides statements of intention that underpin a records management programme (Masesh, 2015). The study sought to find out whether the ministries had policies to guide the management of e-records. As shown in Figure 5.1 a total of 88 (53%) respondents acknowledged the non-existence of policies for managing e-Records while 23 (14%) respondents acknowledged the existence of policies but did not know the major areas the policy covered. Some 52 (32%) respondents were not sure whether a policy for managing e-Records existed.

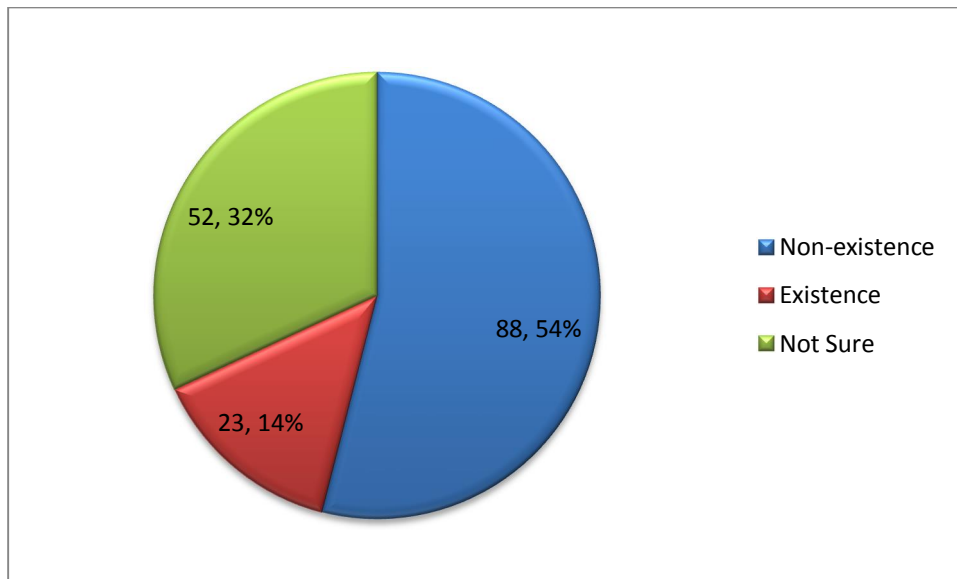


Figure 5.3: The policies for managing e-Records

The study confirmed that a policy for managing e-Records was existent. Interviews with the Director for Swaziland National Archives revealed that SNA has developed and distributed a national records management policy guideline, to help the ministries to develop internal records management policies throughout government ministries. *“There is a National Records Management Policy that has been developed by SNA and circulated to all government ministries and departments so that they can develop their own policies”*. ISO 15489-1 (2016) (section 5) stipulates that a records management policy and procedures of an organisation should demonstrate the application of the regulatory environment to their business processes. Section 6 specifies that an organisation should *“establish, document, maintain and promulgate policies, procedures”* to guarantee that *“its business need for evidence and accountability and information about activities is met”*. The study therefore confirms that the guiding national records management policy has not been used by government ministries. According to the State of Montana (2002) and Hounsome (2001), the lack of records management policies and procedures in an organisation are the main causes of poor records management. Moloji and Mutula (2007) note that the absence of an e- records management policy may suggest that e-Records may not be captured and managed in a systematic fashion and this may compromise the long term availability of e-Records as evidence of business transactions as well as the accessibility of e-records for public consumption as e-archives. The study also established that the Ministry of ICT had developed an ICT Policy and e-Government strategy, however it did not address electronic record

keeping issues. The e-Government strategy emphasises that e-Government is a vehicle for national economic and social development by ensuring effectiveness, efficiency, transparency and accountability on the part of the government, but it does not highlight whether -Records ready in government ministries for purposes of use in the implementation of e-government. On the other hand the ICT policy addresses issues such as, the ICT infrastructure policy, policy compliance and sustainability and procurement, maintenance and disposal of ICT infrastructure and systems.

The Director of Computer Services explained that *“there is an ICT policy in place and an e-Government strategy but they don’t capture the creation, receipt, use and disposal of records but instead there is a records management procedures which captures that”*.

Through document analysis, the research revealed that the ICT policy and the e-Government strategy did not include strategies for the creation, receipt, use and maintenance, storage, security and integrity and disposal of e-records. Such strategies will guide records officers and action officers in the proper management of e-Records from creation to disposition. Without a strategy or policy in place, it becomes difficult for the ministries to manage records in an electronic environment.

5.3.2.2 Compliance to standards

It is an important requirement for every organisation to keep its records in accordance with international records management standards, such as ISO 15489, if efficient and effective record-keeping is to be realised. It is also essential to adopt a national and international minimum standard so that government systems are interoperable and share a common baseline for e-Records functionality (IRMT, 2004). There are several internationally recognised standards and functional requirement standards which include the following:

- Module 3, Guidelines and Functional Requirements for Records in Business Systems, ICA: Functional Specifications. Business Information Systems Software, National Archives of Australia;
- MoReq 2, Model Requirements Specification for the Management of Electronic Records;
- ISO 15489: 2016: Information and Documentation ó Records Management;
- E-Records Readiness Tool, International Records Management Trust.

- European Commission's Model

Through an interview with the Director of Swaziland National Archives, the study revealed that only ISO 15489: 2001 was adopted by the ministries as international standard for records management. *“We are using ISO 15489: 2001 as a benchmark for developing the Records Management Procedure Manual produced by Swaziland National Archives which is used by the different ministries and departments”.*

According to IRMT, (2004) such standards and functional requirements are essential to ensure that government ICT systems consistently create, capture, organise, store, search, retrieve and preserve e-Records and to protect the integrity and trustworthiness of those e-Records

5.3.2.3 Compliance to procedures and tools

According to IRMT E-Records Readiness Tool (2004), records management policies must be supported by tools and procedures to ensure effective policy implementation. In the same vein, ISO 15489:2016 as one of the international benchmarks on records management encourages organisations to document procedures for ease of guidance for both records managers and users. This standard also promotes compliance to these procedures. These records management tools need to be accompanied by procedure manuals describing when and how staff should fulfil their responsibilities for creating, capturing, classifying, storing, retrieving, tracking, disposing and preserving records (IRMT, 2004:9). Records management tools as per the IRMT E-Records Readiness Tool (2004) such as standard forms and templates, records classification schemes, records metadata and profile templates, records retention and disposition schedules, security and access classification schemes, search and retrieval indexes and taxonomies, repositories and equipment for the storage of physical and digital records, systems backup and recovery procedures, business continuity plans and vital records plans.

5.3.2.3.1 Records management procedures manual

The study sought to ascertain the level of compliance to procedures and tools. The study revealed that there are documented records management procedures manual developed by Swaziland National Archives which are used by the ministries. However, the study revealed

that the procedures manual caters for physical records and it is not clear for e-records. Nevertheless, the study has revealed that 18 (25.7%) records officers that comply to the procedures manual indicated that the manual was 'Above average' while 29 (41.4%) said it was below average. This is shown below in Table 5.2.

Table 5.2: Compliance to records management procedure and tools [N=70] (Records officers)

Response	Frequency	Percent
Above average	18	25.7
Average	23	32.8
Below Average	29	41.4
TOTAL	70	100

5.3.2.3.2 Records Appraisal

The registry officers were asked if they had an appraisal programme in their ministries. Figure 5.4 shows that 42 (60%) of the registry officers seemed to be aware of what appraisal is and when it is done.

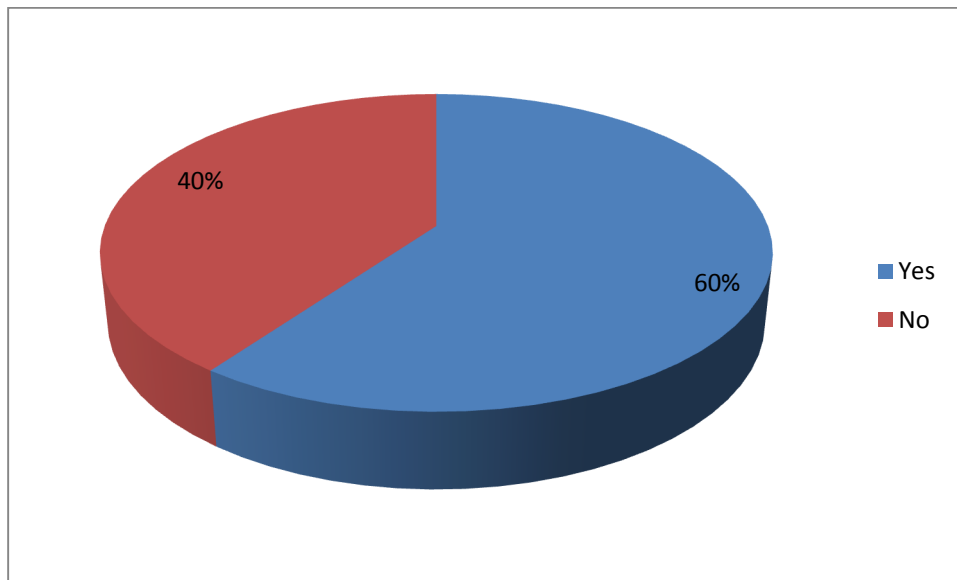


Figure 5.4: Records appraisal programme

The study also sought to find out when registry offices are conducting appraisal both manually and on e-Records. The respondents had different comments on when records are being appraised both manually and on e- records:

- *“Appraisal is done once in a while when there is shortage of storage space in the registry. If I remember very well it was done 5 years back”.*
- *“There is no programme for records appraisal and I don’t remember us doing the appraisal”.*
- *There is a programme for records appraisal but due to shortage of staff we normally do it once in a while. There are a lot of documents that are in the storeroom that we need to appraise before we send them to SNA”.*
- *There is no programme on how to appraise e-Records therefore we don’t appraise any electronic records”.*

Lack of a systematic programme would result in the least effective and haphazard records appraisal in the Swaziland government ministries. The study also revealed that there is a programme for records appraisal and disposition where those files that have been dismissed are destroyed as per the provision of Swaziland’s National Archives Act no.5 of 1971 while those found to have continuing value are transferred to the Swaziland National Archives (SNA). However, it is not clear how e-Records are being appraised.

5.3.2.3.3 Disposal procedures

The registry officers were asked what legal requirements governed when records (both electronic and manual records) should be destroyed and what records should be permanently preserved. It was found that although there was a legal basis for records destruction, 29 (41.4%) of the registry officers were not aware of such legal guidelines as shown in figure 5.5. Such legal requirements include the stipulation in Act no. 5 and the retention schedule. However, those who were aware of this legal requirement did not apply it.

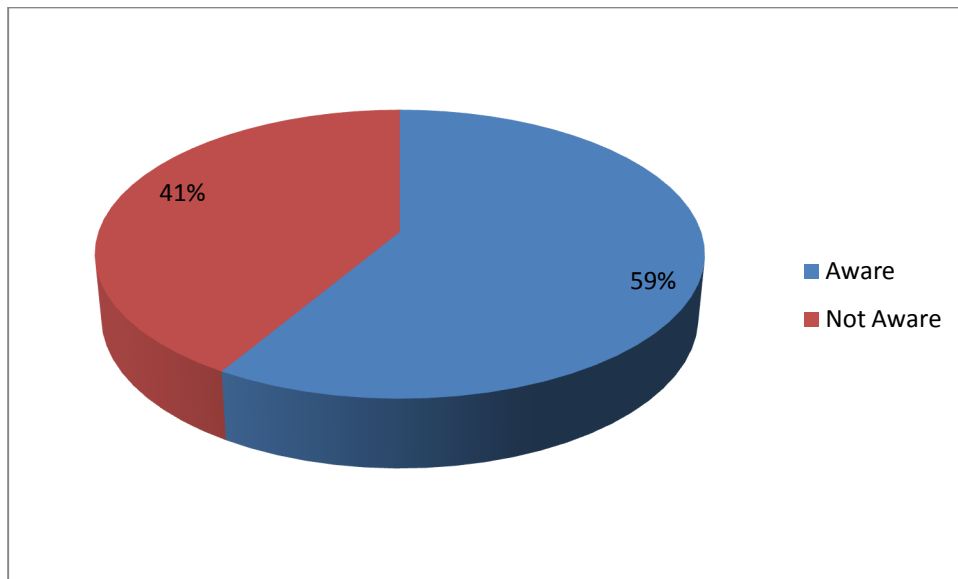


Figure 5.5: Disposal procedure of records

The study also investigated how often records were transferred to the archives. Table 5.3 shows that 18 (25.7%) respondents transferred records after 3 years, and 20 (28.5 %) transferred records after 5 years. Further follow up through observation revealed that the records that took a long a time to be transferred to archives were records like financial statements, payment vouchers, and legal records.

Table 5.3: Frequency of records transfer to Swaziland’s National Archives [N=70]

Response	Frequency	Percent
3 years	18	25.7
5 years	32	45.71
Above 5 years	20	28.5
TOTAL	70	100

The researcher also sought to establish how action officers deal with records which are not being used or not required. Some of the responses from the action officers were:

- *“I send to the registry because I don’t know the procedure from the Archives on how to destroy them in a proper way”.*
- *“I don’t throw away but keep them in storeroom and the registry officers will see what to do about them”.*

- *“I take all records which I am not using to the registry and they will see what to do and Swaziland National Archives sometimes come to take those records”.*
- *I keep them in another cabinet in my office; I don’t take them to the storeroom because it has confidential information”.*
- *“I save my important mail to folders and those that I don’t need I just delete daily because of the low inbox capacity.”*
- *“I save them to the ministry server and the IT officer will see what do about them”*

The researcher observed that storerooms stored closed files on top of their cabinets, and these were to be destroyed or sent to archives. These records are competing for space with other materials such as old computers, chairs, vacuum cleaners, fans and heaters. Files in these storerooms were neither well-arranged nor documented, causing problems when action officers wanted to retrieve records. Most of the time, records in the storerooms were forgotten and remembered only when there was a need to extract information from them.

In an interview, the Director of SNA confirmed that there are procedures which deal with records that are no longer required by ministries *“There are records disposal procedures that are supposed to be used by the ministries and department to guide officers on how to dispose records that are no longer required by the different ministries and departments.* These document sets out the periods for which the ministries records should be retained to meet its operational needs and to comply with legal and other requirements (ISO 15489-1:2016). However, the study has revealed that the procedures cater for physical records and the e-Records disposal procedure are not regulated.

5.3.2.3.4 Functional classification scheme

Classification is essential as it helps capture records in a system, thus allowing appropriate linking, grouping, naming, security protection, user permission, retrieval and disposal (ISO 15489-1, 2016:13). Classification also enables records to be grouped together by functions and activities and to be managed as an aggregation (Reed 2005:112).

The study sought to find out if there is a functional classification system that is used by the ministries. The study revealed that there is a functional classification system developed by Swaziland National Archives which is used by the ministries. The results revealed that 120

(74%) of the respondents were using functional classification systems while others did not apply any classification scheme at all. Those respondents who did not use the classification scheme struggled to locate and access their files. They noted that they were not applying the classification scheme because they were never trained on how to use it. The researcher observed that this created a problem of accessing information contained in records especially, when the incumbents were away from office. Some respondents 15 (9%) shared the same view that none use of a classification system makes it difficult to access files that contain necessary information for decision making. This affects the decision making process, resulting in delayed decision or other decisions not made at all due to missing information. In addition, this resulted in improper referencing of mail. The survey findings also revealed that only 36 (40%) of action officers referenced their correspondence perhaps due to limited use of any classification system and lack of any procedures for maintenance and use of the correspondence files. The results also revealed that files had incomplete accounts of what transactions had taken place. Consequently, information that was known to exist was not easily retrievable and replies to incoming mail in many instances never found their way into files. De Wet and Du Toit (2000:79), state that routing mechanism with which records can be directed for processing by specific people will enable structured information flow and appropriate action. Kemoni (2007:299) also points out that a sound records management programme for both paper and electronic records requires the presence of a records classification scheme.

5.3.2.4 Responsibilities for records management

Organisations that implement e-Government services should establish internal policies and responsibilities for records and information management in a form appropriate to its internal organisational structure, culture and resources (IRMT, 2004). The study sought to establish if officers knew their responsibilities in the management of records.

5.3.2.4.1 Action officers

Questions were raised to action officers as creators and users of records in the ministries to establish their responsibilities for managing records in the ministries. Specifically the study sought to find out if there are any guidelines, which encourage the creation of e-Records needed for business within the ministries. Figure 5.6 shows that 29 (32%) of respondents were aware of guidelines used by ministries to guide them on the creation of e-records.

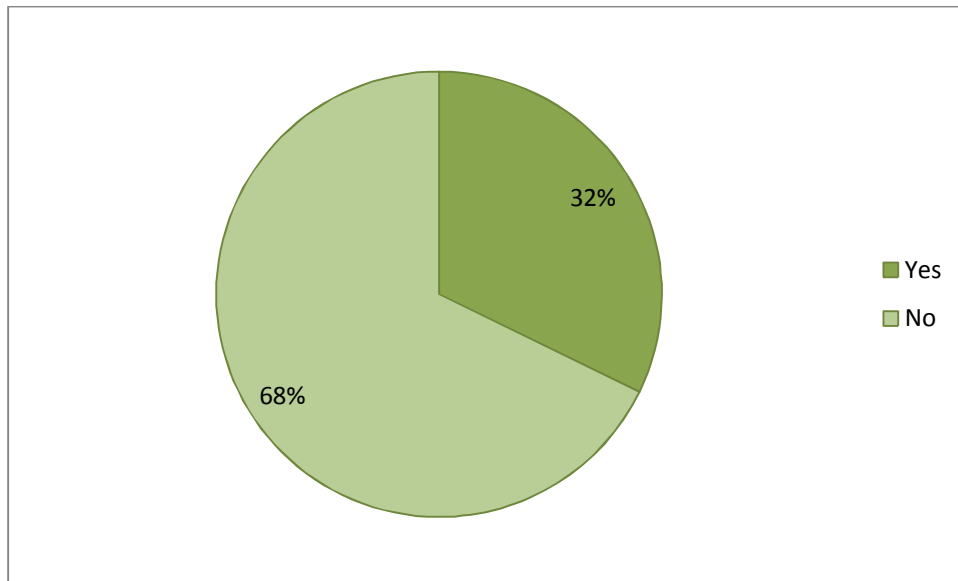


Figure 5.6 Guidelines which encourage the creation of e-Records

When the researcher was collecting the questionnaires from the action officers, some of the action officers felt that they had nothing to do with records, and so the researcher was referred to the registry.

Some of the responses from the action officers were:

- “ *Records Management is not my responsibility at all please ask the people from the registry to fill the questionnaire for you*”
- “ *I have given the registry staff the questionnaire because I don’t have anything to do with records*”
- “ *You were supposed to go to the registry or National Archives because records’ keeping is not my responsibility*”.

5.3.2.4.2 Registry officer

The research meant to establish “*Which officer has the responsibility for day-to-day management of records including electronic within the ministries?*” The study revealed that 120 (75%) felt that day to day management of records was the responsibility of registry staff; 2 (1.25%) felt that it was the responsibility of Action officers and 38 (23.75%) felt that it was the responsibility of everyone in the ministries. Figure 5.7 presents these findings.

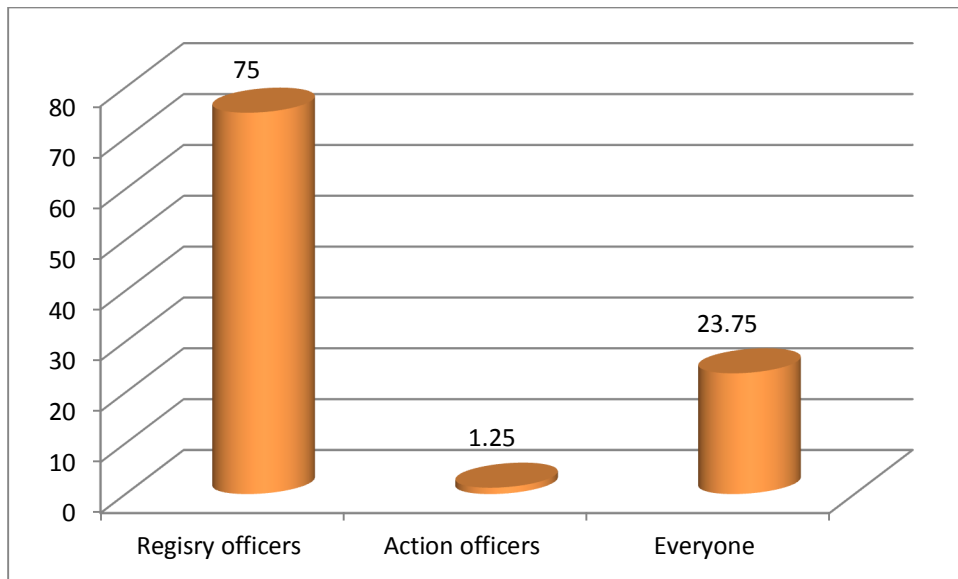


Figure 5.7 Officers responsible for day-to-day management of records including electronic ones within the ministry

Interviews with the Director of SNA revealed that registry officers have the responsibility to manage records within the government ministries. *“There are records management responsibilities given to officers who work in the registries since it is their responsibility to manage records within the ministries.”*

However, the responses from questionnaires show that there is a general feeling that the records management officers do not have adequate skills to manage both electronic and manual records.

5.3.2.4.3 Swaziland National Archives

Records management is one area of general administration and yet the responsibilities regarding financial, IT, legal, procurement and human resource management, also part of general administration are very well known by members of staff, even those not dealing with these issues directly (Nengomasha, 2009). The study sought to find answer the question *“Which Ministry or Department has the overall responsibility for the management of records including electronic records in the Ministries?”* All the respondents 163 (100%) were fully aware that the Swaziland National Archives has the responsibility of designing policies, procedures, guidelines and giving professional guidance to all government ministries and departments in the country on issues of Records Management. SNA serves as a watchdog over the creation, maintenance, use, and disposal of records created by the Swaziland government ministries to facilitate efficient administration and the transfer of records of

enduring value to the archives repositories where they are preserved for present and future generations.

5.3.2.4.4 Monitoring

According to Asogwa (2012), records management infrastructures such as government officers, procedures, tools and technologies must be regularly monitored and evaluated to determine the ministries' readiness for electronic records management. The study sought to find out who normally conducts audits in the ministries to evaluate records keeping practices. The results show that 60 (86%) indicated that Swaziland National Archives is the one that normally conducts audits within the ministries as shown in figure 5.8.

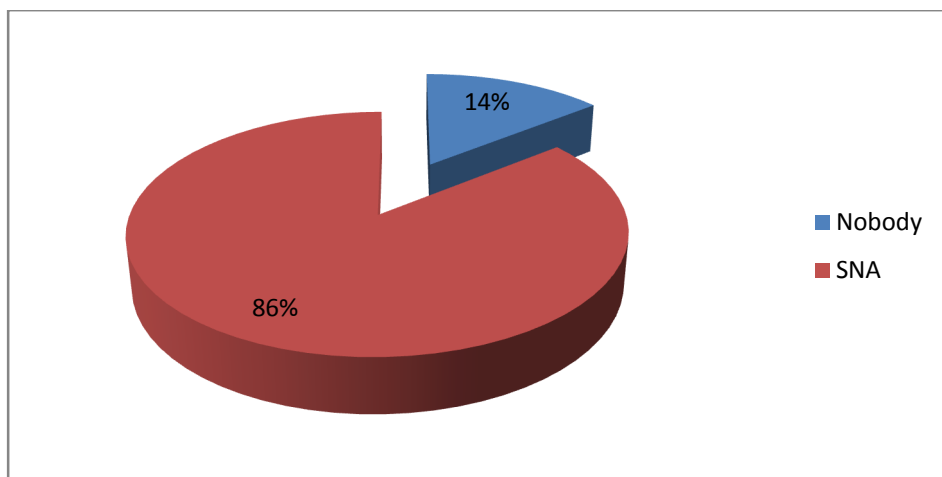


Figure 5.8: Responsibility of records keeping audits

The respondents were also asked how often the registry audits are carried out within the ministries. Twenty eight (40 %) indicated that audits are carried out after every 3 years while 10 (14%) indicated that audits were never conducted in their registries. (See figure 5.9).

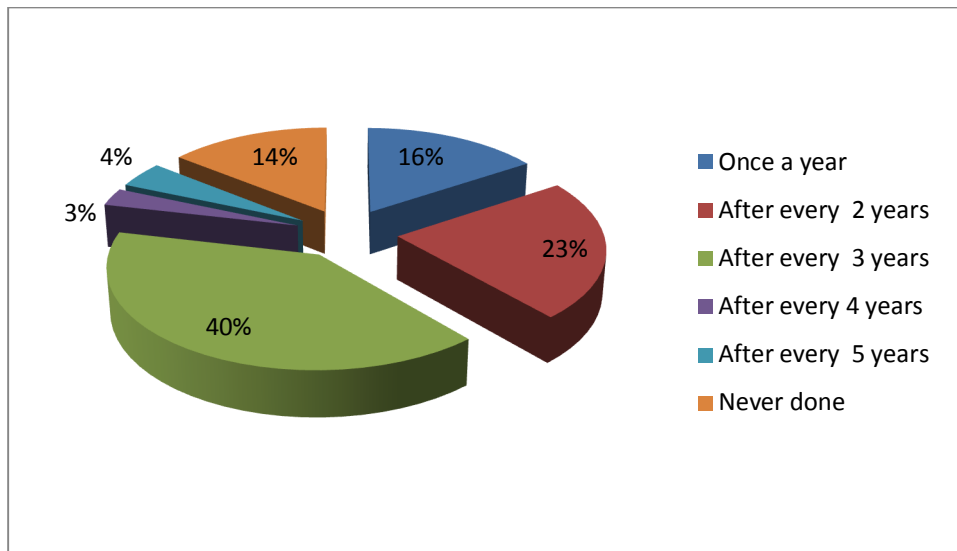


Figure 5.9: Frequency of Registry audits

A follow up interview with the Director of Swaziland National Archives confirmed that registry audits are rarely done in the ministries due to shortage of staff but registry officers are normally trained by Swaziland National Archives on records keeping practices.

“We do conduct audits in the ministries and departments but not on a frequent basis due to resources on our part. The registry staff are trained in our training centre to improve records management practices in their different ministries”.

Lack of consistent auditing is likely to increase the level of non-compliance to set international standards of record keeping in Swaziland government ministries.

5.4 Electronic records management products and technologies

The study sought to find out whether technology for electronic records management was available in the ministries. Respondents were presented with a list of electronic technologies and asked to tick against the ones that were available in their offices. Table 5.4 shows that 111 (69.3%) indicated that they have computers in their offices; 140 (87.5%) indicated that they have mobile phones; 10 (6.25%) digital camera and 2 (1.25%) EDRMS.

Table 5.4: Technologies for electronic records management (N160)

Response	Frequency	Percentage
Computers	111	69.3
Printer, scanners, photocopiers, laminators	70	43.75
CD, CD-ROM, DVD, VCD, Flash Drive	109	68
Electronic document records management system (EDRMS)	2	1.25
Internet connectivity	98	61.25
Online transactional processing systems (OLTPS)	0	0
Mobile phones	140	87.5
Decision support systems (DSS)	0	0
Digital camera	10	6.25
Cassette recorder and tapes	35	21.9

***Multiple responses were possible**

Although the findings show that most of the technologies for electronic records creation were available in the ministries, none of the ministries had Decision Support System (DSS) and Online Transactional Processing System (OLTPS). Bantin (2002) has identified these systems as the most suitable systems for processing, reducing clerical costs, and updating documents

5.4.1 Strategies used to create and receive e-Records

The respondents were also asked to indicate strategies they use to create and receive e-Records in their officers. The question was directed to registry staff and action officers whose responsibilities include the creation and receipt, use, maintenance and disposal of e-Records as part of their day to day business activity in the ministries. Table 5.5 shows that 151 (94%) respondents made printed copies of the e-Records they created while 151 (94%) made printed copies of the official records they received. One hundred and eleven (69.3%) create and save on computer files while 51(32%) receive and save e-Records on the computer hard disk. One hundred and nine (68%) of the respondents create and save on storage devices such as CD and USB and while 12 (9%) receive and store e- records on storage devices.

The findings indicate that there is no standardised procedure put in place for the effective management of e-Records across Swaziland Government Ministries. This can be attributed to the general practice that most e-Records (including e-mails) were created and then filed as paper-based records. Such a situation is not good especially if the e-Records will exist as corporate memory of those ministries. The study also observed that each office that created electronic records had its own way of maintaining, retrieving, and storing electronic records. In some offices, memory sticks were found lying on top of tables without protective lids to minimize their exposure to dust.

Table 5.5: Strategies used to create and receive e-Records [N=160]

Response	Frequency	Percentage
Create and save on computer files	111	69.3
Create and save on storage devices such as CD and USB	109	68
Receive and save on the computer hard disk	51	32
Make printed copies after receipt	151	94
Create and make printed copies	151	94
Receive and store on storage devices	12	9

***Multiple responses were possible**

The researcher also observed that the majority of respondents made printed copies of the records they created and received. This could be attributed to the fact that despite computerization of some of the ministries and departments, those ministries had not done away with the use of paper records as a means of transacting business. Respondents maintained soft copies of the e-Records they created and received. Once a printed copy was made of the e-record, the soft copy was no longer considered important to the business transaction that led to its creation or receipt. The strategies used to create and receive official e-Records by the ministries were individual measures that were undertaken by the respondents without necessarily involving their ministries or Swaziland National Archives as a watchdog over the creation, maintenance, use, and disposal of records. It was apparent therefore, that the creation and receipt of e-Records did not adhere to any records management principles or policy.

A follow up interview with the Director of Swaziland National Archives and Director Computer Services revealed that SNA is piloting an EDRM solution to the Ministry of ICT and the Cabinet office to effectively manage and preserve government records as corporate memory for future generations. The main aim is to bring uniformity and standardization of electronic records systems and management practice across government ministries and departments. The study observed that although there is a system that is being piloted within the Ministry of ICT and Cabinet office, some respondents kept printed copies of e-Records in desk drawers and cabinets without necessarily filing the records. Paper records had continued to clog the office space thus, resulting in the in-accessibility of records whenever they were required for reference. Classification, indexing and tracking of e-Records was non-existent within the ministries.

5.4.2 Strategies used to access e-Records

ISO 15489-1(2016:8) states that records systems should include and apply controls on access to ensure that the integrity of the records is not compromised. The study sought to establish how officers accessed information contained in e-records. The results revealed that 151 (94%) respondents made printed copies of e-Records and filed copies manually in folders to facilitate access while 109 (68%) respondents used storage devices such as USB sticks and CDs as a strategy to ensure that whenever the information was required it was made available in the Ministries and Departments. 60 (40.6%) of the respondents indicated that they used backup while 98 (61.25%) respondents used electronic mail to distribute e-Records. The results are presented in Table 5.6.

Table 5.6: Strategies used to access e-Records (N=160)

Response	Frequency	Percentage
Making printed copies	151	94
Storage devices such as USB sticks and CDs	109	68
Back up	65	40.6
Electronically via mail	98	61.25

***Multiple responses were possible**

The researcher also established that some respondents use personal folders to store e-Records. Such respondents did so as a personal initiative and gave the folders names that

were only known to them. The study also noted that there were no procedures in place to provide guidance on the management of computer files on how it has to be done to prevent their misuse. Without the assistance of records creators or the persons who received the e-record, it is impossible to access or retrieve the information. At times officers were having difficulties retrieving the e- Records they stored on computer folders because they had forgotten the file name(s) and the location of the folder(s). The study also observed that some staff members did not seem to be aware of the requirements for naming and storing e- records to aid retrieval.

5.4.3 Government ICT application environment

The study also assessed the ICT resources and ongoing initiatives to determine the extent to which they support critical government programmes. These encompass the government application environment that includes: the existing ICT application portfolio, technology, information infrastructure, human resource capacities, training and development and institutional support mechanisms. In this study, some of these entities are rearranged for better analytic coherence and alignment. In particular, technology and information infrastructure have been combined into ICT infrastructure. Thus, the issues examined in this study include, the ICT application portfolio, ICT infrastructure, human resource capacity, training and development and institutional support environment. The information in this section is based on an interview with the Director of Computer Services who is responsible for designing and implementing ICT policies, procedures, guidelines and giving professional guidance to government Ministries on issues of ICT infrastructure.

5.4.3.1 ICT Application portfolio

The Director of Computer services explained that *“The government’s ICT application portfolio comprises two broad categories of applications, a ministries application and a government-wide application. Whereas the use of ministries’ applications is confined to specific ministries or departments, government-wide applications are used throughout the government administration and in most cases throughout the country”*.

5.4.3.2 Ministries applications

The Director of Computer Services explained that *“The ministries applications run mainly in a PC environment, operating either as a stand-alone workstation or in a local area network*

configuration. They are mainly technical and professional applications used to support the information needs of specific ministries or departments. Consequently, these applications generally fall into two broad categories, namely office application packages (OPP) and department specific applications”.

5.4.3.3 Office productivity packages

The Director of Computer Services explained that *“Office productivity packages (OPP) comprise general-purpose packages that combine hitherto disparate applications such as word processing, spreadsheets, databases, presentation graphics and even project management. OPP’s run mainly in a PC environment, in a standalone or in a LAN configuration. Typical OPP’s in the market include Microsoft Office, Smart Suite, and Corel’s Perfect Office. Although not necessarily the best OPP in the market, Microsoft Office is certainly the most popular and widely used”*

This study has established that use of OPP in government is widespread. All the ministries offices visited were found to have desktops either as stand alone or connected to the local area network. These systems were found to be running OPPs mostly based on a Microsoft Office suite and Microsoft Outlook.

Furthermore, these OPPs were found to be running on various versions of Windows 10. This is a strong case for OPP application in government because it permits the standardisation of selected applications on a government-wide basis. For example, standard documentation templates can be created for use in all official government correspondence and reporting. This has the advantage of establishing uniform standards for all correspondence and reports coming from the government. Furthermore, it provides a basis for the development of government electronic records management systems, a key application domain for e-Government.

5.4.3.4 Ministry-specific applications

The study sought to find out PC-based applications that supports the information processing requirements of particular ministries. Through content analysis, the study revealed that systems in this category include, but are not limited to the following as shown in Table 5.7.

Table 5.7: Ministries-specific applications system

Ministry	Project	Project description
Deputy Prime Minister's Office	Accounting system for a regional development fund	Accounting system to support the management of community development funds.
Ministry of Planning And Development	Capital budgeting, planning and monitoring system and an economic modelling System	It's a system that provides inputs into the national budgeting system.
Ministry of Housing and Urban Development	Mail management system	It's a system that captures incoming mail and tracks their movement throughout the ministry.
Ministry Of Public Works And Transport	Resources management system	It's a system that captures and maintains information on different categories of contractors, consultants, service providers, and material suppliers
Ministry of Health and Welfare	Drug procurement system	It's a system that processes the procurement and distribution of drugs to government hospitals and other health institutions.
Ministry of ICT	EDRMS	Registration, classification, request, retrieval, tracking, destruction and transfer of e-records and manual records. Will ensure that records are not altered in order to preserve their integrity.
Prime Minister office	EDRMS	Registration, classification, request, retrieval, tracking, destruction and transfer of e-records and manual records. Will ensure that records are not altered in order to preserve their integrity.

5.5 Resource capacity and training for e-Records management staff

The need for staffing and professional training in records management is one of the critical areas in understanding the depth and breadth of e-Records management (Kalusopa, 2011:200). Although institutions may have established records and archives policies, tools and procedures, these are bound to be ineffective if they are not supported by qualified records management officers and archives management personnel. (IRMT,2004). ISO 15489-

1:2001 also suggests that institutions should establish an on-going records management training programme for capacity building. The standard also recommends that institutions should strive to have enough capacity in terms of numbers, skills and competences to perform records management duties at different levels to find out the extent to which government ministries are ready for e-Records management.

5.5.1 Budget allocation to records management unit

Many records management programmes in organisations fail due to inadequate funding (Mnjama, 2002: 39). One of the fundamental aspects that determines and influences the success of any records management unit is budgetary allocation for managing such a unit. Consequences of budgetary constraints can also be witnessed when it comes to matters such as capacity building of the registry staff, purchase of specialized storage equipment, payment of registry officers' salaries and other office activities (Tafor, 2001: 40). Therefore if records management unit have to succeed in their mission, budgetary constraints would have to be surmounted. The registry staffs were asked if they were aware of the budget allocation for the records management unit in their ministries. Figure 5.10 shows that there is no budget allocation for records management as a unit but activities were funded through the ministry budget allocation.

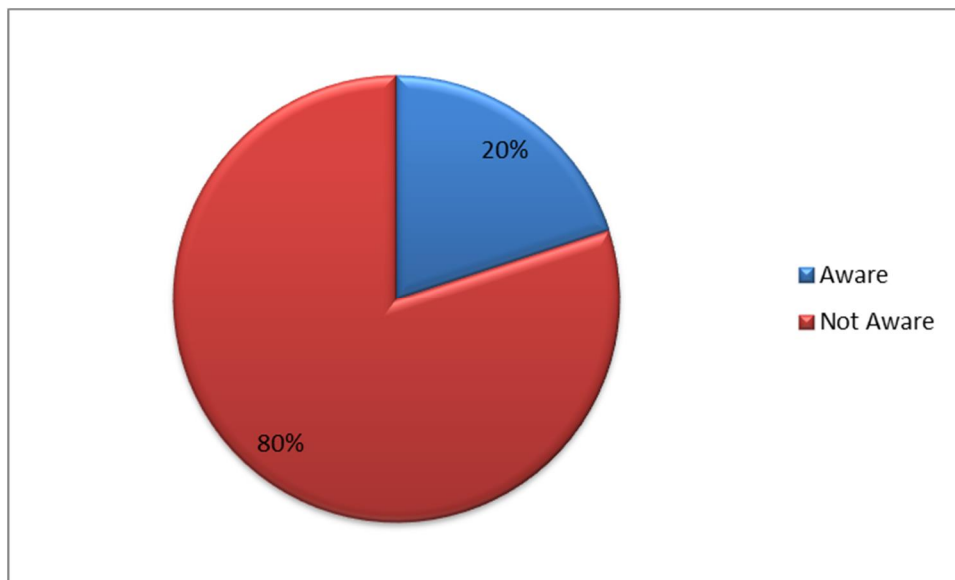


Figure 5.10: Budget allocation to records management unit

Some respondents raised concerns that it was difficult to access funds budgeted for registries. Those who are in management had a bad attitude towards the registries. They perceived them

as having little importance and that they are manned by an unqualified staff who did not know anything. The budget ends up diverted to other departments.

The study also sought to find out if the budget allocated to the ministries is enough to cater for the records management unit needs. The respondents had different comments on budget allocation.

- *“I don’t know any budget allocated to the registry”.*
- *“I don’t think there is a management budget for the registry; this place is a dumping site for old furniture”.*
- *“We are not being taken serious as a registry; we don’t even attend training like other departments”.*
- *“They have bought computers for other departments but as for the registry we are told there is no money”.*
- *“We have insufficient funds to operate the registry and attend training”.*
- *“We don’t have a budget to buy a new filling cabinet since the current one is small”.*
- *“We want to buy blinds and also install air conditioner for the registry but we are told that there is no money; it’s been 5 years now”.*

The responses from participants revealed that the records management is under resourced and less capacitated. Such a scenario is likely to have a negative impact on its endeavour of managing the records of the ministries efficiently. The researcher noted that some registries had no computers to keep their records. This observation is evidence for the response they gave that they are not adequately resourced to do their work. Computers are necessary gadgets for records keeping. Lack of such gadgets makes it difficult to manage records in line with set standards and procedures. It is evident that some government ministries are still far from understanding the importance of registries.

5.5.2 Adequacy of registry staff

When Action Officers were asked if there is enough staff working in the registry, most of the action officers 71 (79%) indicated that there was enough staff responsible for records management in the ministries; 19 (21%) indicated that there wasn’t enough records staff. Figure 5.11 indicates these results.

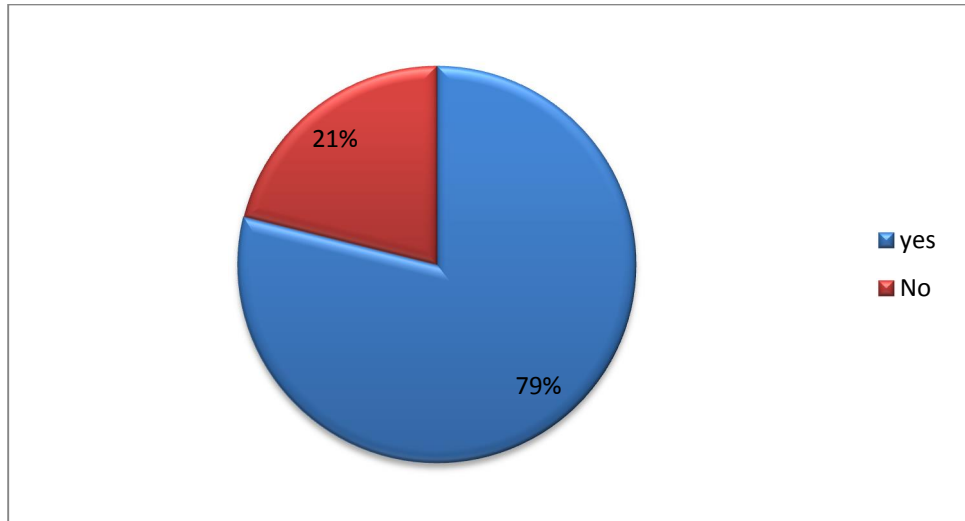


Figure 5.11: Adequacy of records keeping personnel

Although the study shows that there is enough staff working in the registries, the common practice in the ministries is for registry officers to carry out other duties in addition to records keeping functions. Other duties they carry out include collecting and delivering mail from the post office, relieving switchboard operators and private secretaries leaving the registry unattended. These distract them from their core duties of records management. In addition, this shows that records management is not considered as a vital component in government ministries.

5.5.3 Competence level of all registry staff

When Action Officers were asked to rate the competence level of all Records Staff on records management (including e-Records management), 50 (55.5 %) rated them average, 6 (6.66%) above average, 30 (33.33%) below average while 4 (4.44%) said they did not know. The majority of Action Officers rated the competency level of records management staff as being average. Figure 5.12 below summarises these findings.

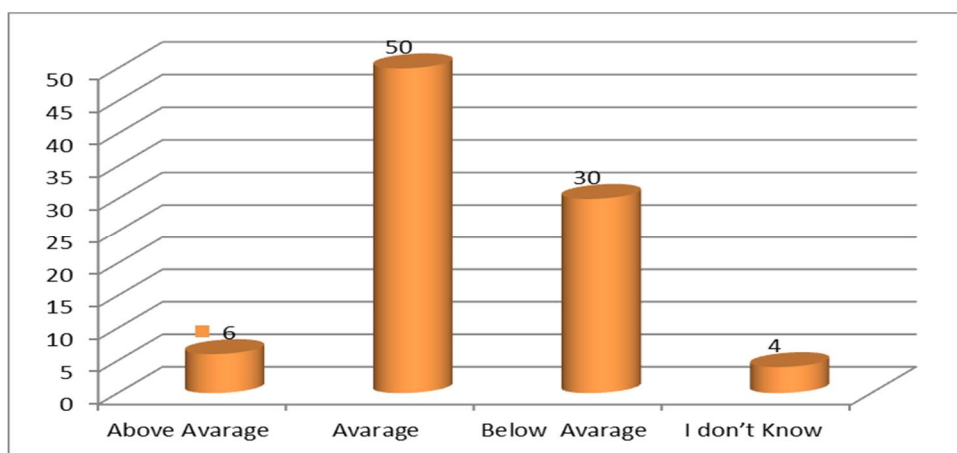


Figure 5.12 Competence levels of all records staff on records management (including e-Records management)

5.5.4 Registry staff remuneration

When Action Officers were asked on the general satisfaction level of Registry Staff remuneration, 23 (25.6%) of them felt it was satisfactory, while 61 (67.7%) felt it is low. figure 5.13 below summarises these findings.

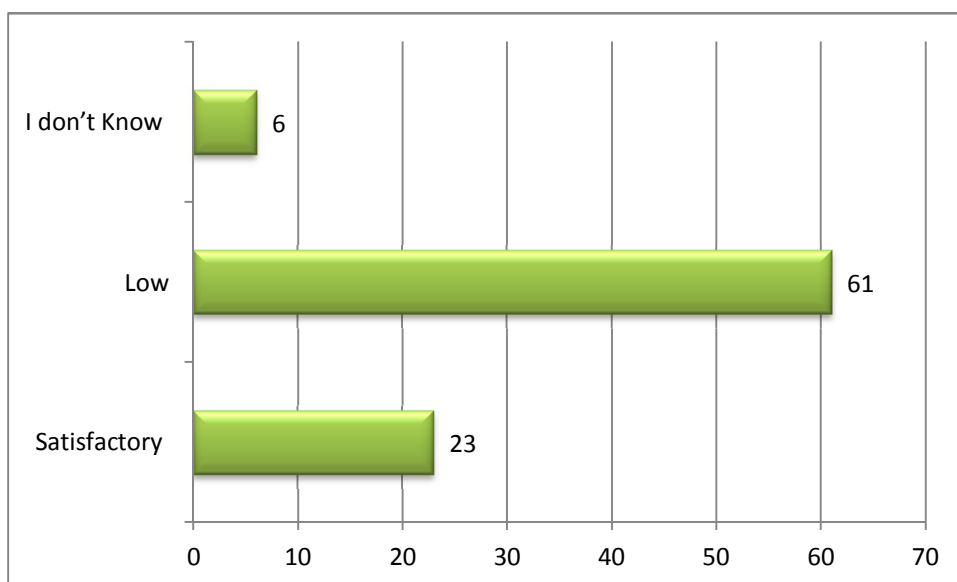


Figure 5.13: Satisfaction level of records staff remuneration

The same question was asked to registry staff. All 70 (100%) respondents felt that their salaries are very low compared to other professions. The study revealed that there is a scheme of service that has been submitted to the Ministry of Public service to adjust the salaries for the records management personnel. Some of the registry staff have applied for a variation to

other professions such as human resource since the remuneration there is better than records management. Such a situation is likely to disturb the stability of the records management unit. Herzberg's hygiene motivation theory indicates that if workers get low remuneration that doesn't address their needs they become demotivated and less productive.

5.5.5 Qualifications of registry staff

The survey sought to determine the qualifications of staff appointed to the position of records/registry. The results shown in table 5.8 reveal that the education backgrounds of the respondents were diverse across various government ministries and departments. The majority of the respondents 45 (64 %) had no qualification in records management, while 5 (7%) had other qualifications which are not relevant to records management; 15 (21%) had certificate in records management; 5 (7 %) had diploma in records management and 1 (1%) had degree in records management.

Table 5.8: Qualifications of Registry Staff in records management [N=70]

Respondents Qualification	Frequency	Percentage
Masters degree in Archives & records management	0	0
Degree in Archives & records management	1	1
Diploma in Archives & records management	4	6
Certificate in Archives & records management	15	21
Other Qualification	5	7
No qualification in Archives and records management	45	64
TOTAL	70	100

5.5.6 Records management training programmes

The survey sought to find out if records management staff attends any training on records management. Most of the records keeping staff 50 (71%) indicated that they have attended a one to two days training workshops given by the SNA as an induction programme when joining the government. Only 20 (29%) of the 70 records officers said they had not taken the course. Some courses are offered by private institutions such as the Institute of Development Management (IDM). The duration ranges from one week to four weeks. The 20 registry staff raised a concern that they normally request to attend workshops at the beginning of the year but they received no response to their requests.

Participants said that their promotion was based on their long term service to the ministries not on training in the field of records management. They continued to assert that they have never been sent for in-service training to upscale themselves due to shortage of funds in the ministry of Public Service.

5.5.7 Training in electronic records management

This survey sought to determine whether registry staff attends any training in e-Records management. As shown in Figure 5.14, findings indicated that 5(7%) respondents had knowledge and skills in e-Records management while 65 (93%) did not. The 5(7%) respondents who had knowledge and skills in e-Records got the skills from institutions that offered education and training in Archives and Records Management. This was an indication that there is lack of training and awareness on the importance of records management in the ministries. A follow-up interview with the Director of SNA revealed that the Ministry of Public Service in conjunction with the SNA is in the process of rolling out a programme that is aimed at training all records staff who do not have formal training in records management. *“We are in a process together with Public Service to send all records staff for training at least for Certificate in records and Archives Management in order to qualify to work in a records office in any government ministry or department.”*

The study shows that in the ministries, the registry officers are still lacking the skills needed to manage government records. Kemoni (2007) noted that effective management of records was dependent upon staff responsible for records receiving education and training in records management. This study concurs with the author's view as records and especially e-Records management is a specialized area which one cannot grasp through orientation.

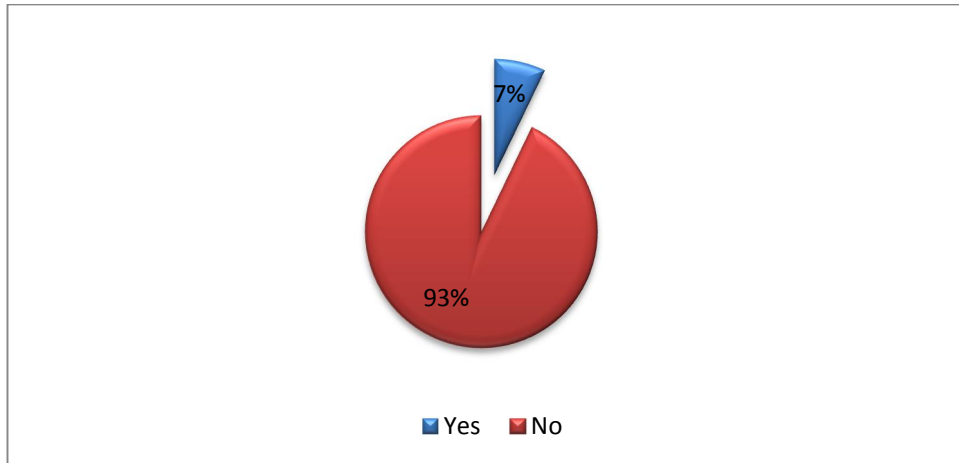


Figure 5.14: Training for the management of e-Records

5.5.8 Computer literacy

In order to manage electronic records effectively in an increasingly technological environment, registry staff will need to have a basic understanding of several areas of information technology. A question aimed at establishing the level of computer literacy among registry officers was asked in this regard. The majority of the respondents (45; 64 %) rated themselves as good, 14 (20 %) rated themselves as poor. (See figure 5.15). This implies that basic computer literacy at the ministries was good. This means the registry staff are able to use computers to create, receive, distribute, store and dispose of e-Records but not from a records management point of view. However the study also established that the officers were currently incapable of using their knowledge and skills because some registries were not equipped with computers.

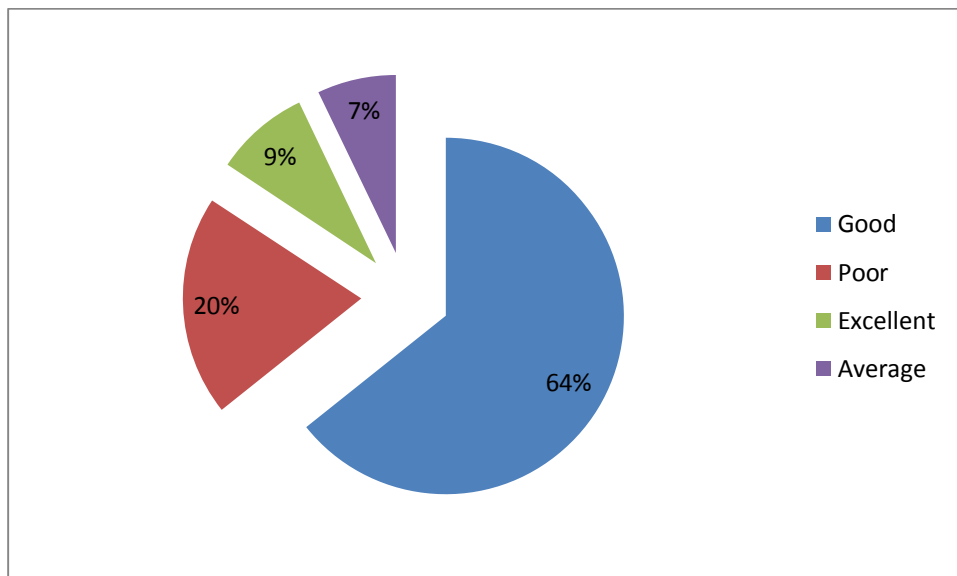


Figure 5.15: Level of computer literacy

The study also sought to find out if the registry staff applied their ICT skills in managing e-Records as well. As shown in Figure 5.16, the findings indicated that 5(7%) respondents had applied their skills in managing e-Records while 65 (93%) did not. A follow up observation also revealed that the registry staff lacked technical knowhow on how to manage e-Records from a records management point of view.

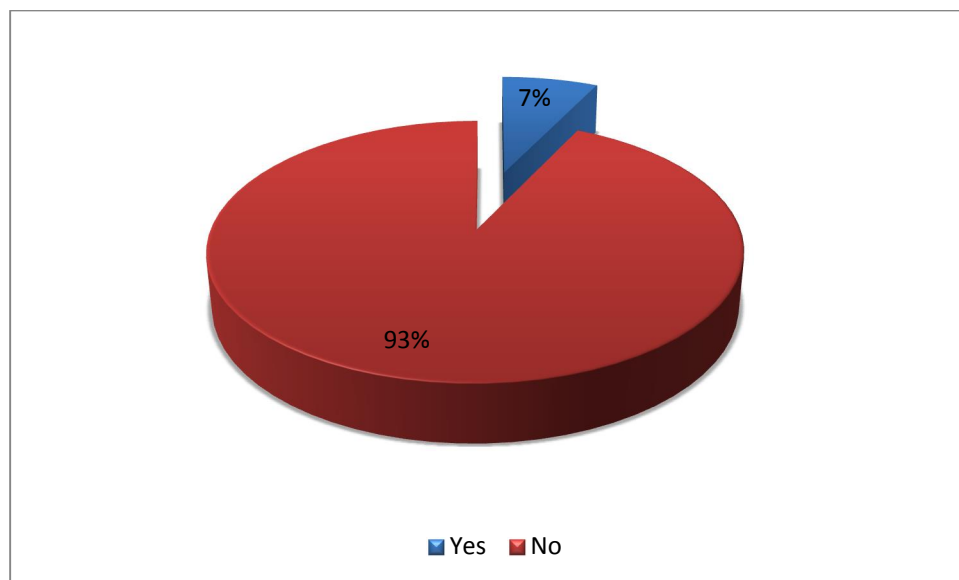


Figure: 5.16: ICT skills in managing e-Records

5.6 Internal awareness of link of e-Record management with e-Government strategy

IRMT (2004:12) E-Records Readiness Toolkit notes that a government agency may have good records management policies, procedures, tools and resources but these will be useless unless there is a commitment to implementing them. Action officers and records personnel need to be sensitised about the importance of trustworthy and well-managed records for delivering effective government services and for protecting institutional accountability and integrity (IRMT, 2004:12). The Swaziland National Archives (SNA) Records Management Procedures Manual also encourages ministries and departments to regularly create awareness about the importance of sound records management among the records staff and action officers to ensure better understanding and compliance with the records management policy.

5.6.1 Extent action officers are conversant with electronic records

Action officers were asked whether they were conversant with what electronic records are, how they are managed throughout the life cycle and how they are disposed of after they have served the purpose for which they were created. The majority of them answered that they were not conversant 79 (87.7%) with what e-Records are. However, 11 (12.3%) indicated that they were familiar with certain aspects of electronic records management as show. in figure 5.17.

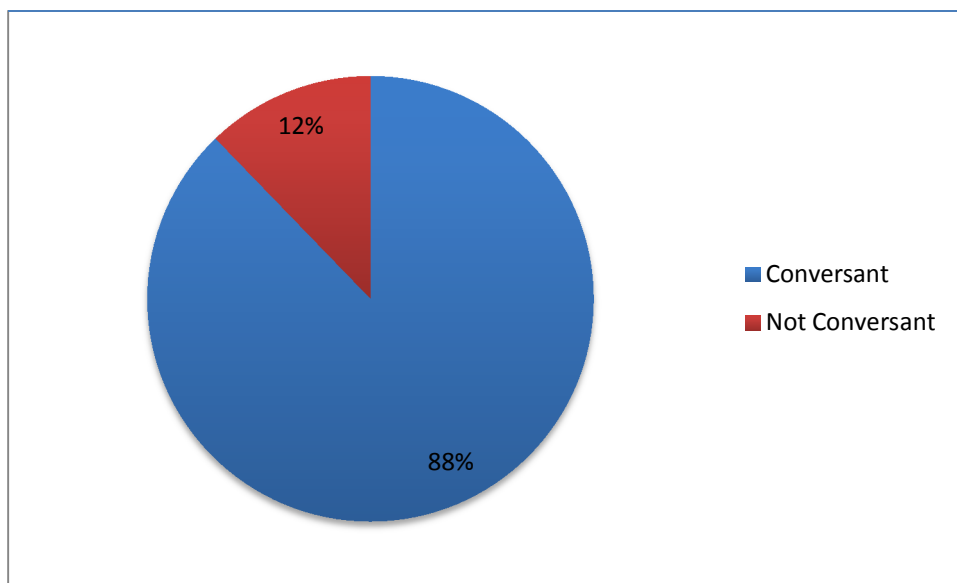


Figure 5.17: Extent action officers are conversant with electronic records

When Registry staff were asked how often the ministry staff were afforded records management sensitization, 6 (9%) of the respondents indicated that sensitisation on Records Management was done “Almost Every time”, 48 (69%) said it was “Sometimes done” while 16 (23%) said it is never done. Action officers as creators and users of records within the government ministries were also asked the same question and 5(5 %) responded with “Almost every time”, 6 (7%) said “Sometimes”, while 29 (32%) said “Almost never” and 50 (56%) said “Never”. Figure 5.18 and 5.19 below summarise these findings.

The Director of SNA confirmed that “Sensitisation is rarely done on action officers due to lack of human resources but we have conducted a workshop to sensitise the PS and US from the different ministries”

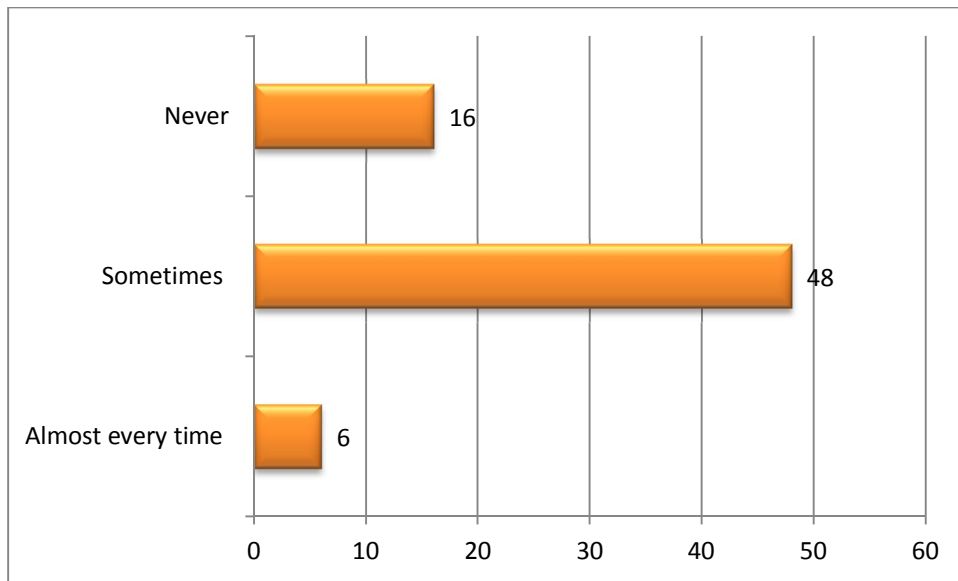


Figure 5.18: How often registry staff afforded records management sensitization?

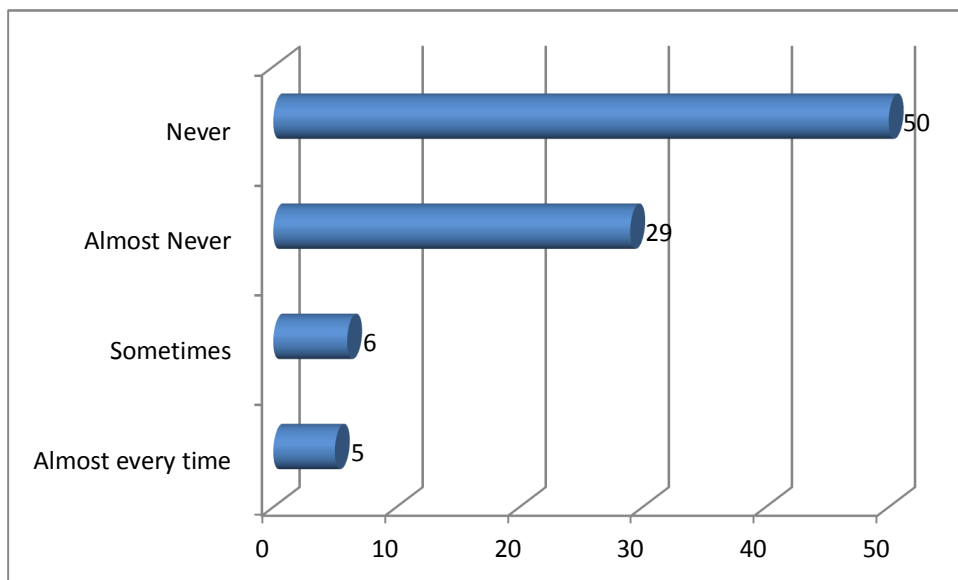


Figure 5.19: Records management sensitization

When Action officers were asked if they know which departmental unit or member of staff to consult for addressing questions on records management policy and procedures, 69 (77%) responded with a 'yes', 8 (9%) said 'No' and 13 (14%) 'I don't know'. Figure 5.20 below summarises these findings.

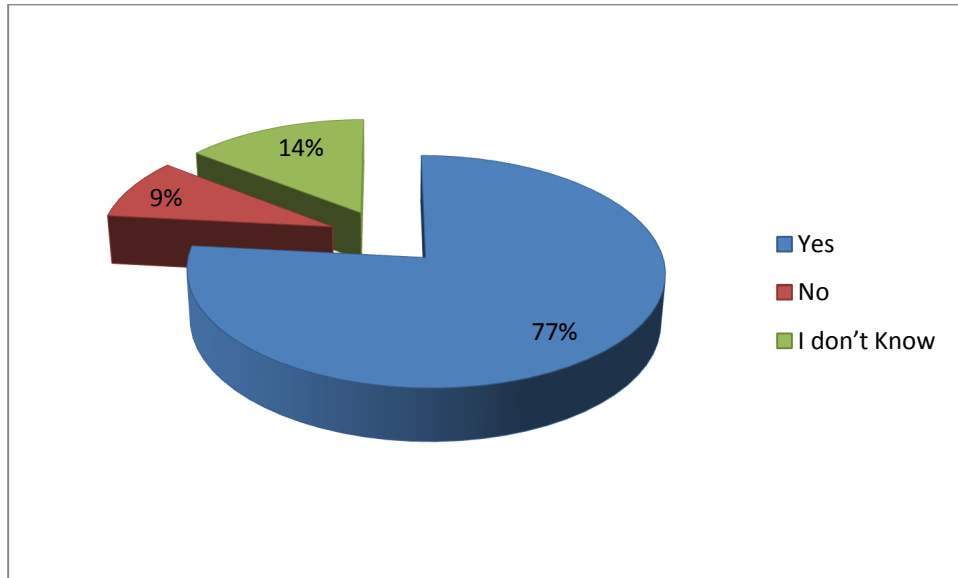


Figure 5.20: Records management policy and procedures

To shed more light on the awareness and attitude of action officers towards records management, action officers were asked what value they placed on sound records management as a key component of the operations of the ministries. Figure 5.21 depicts that 50 (55.6%) of the action officers felt that records management is essential in the operation of the government ministries and departments, 25 (27.8%) indicated that it was very important while only 15 (16.6%) indicated important. The results indicate that action officers valued records management as a major function in the ministries operation.

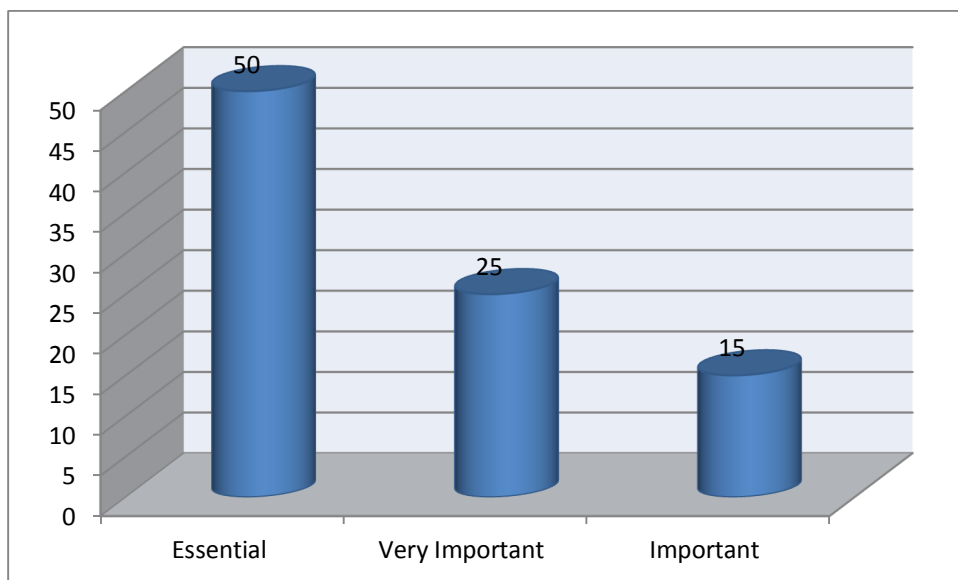


Figure 5.21: Value of records management for the operations of the ministries

The respondents had different comments:

- *“E-Records are used for decision making;”*
- *“Easy to prepare, store, retrieve and disseminate to everyone in the department”;*
- *“Easy to access information compared to the registry”;*
- *“ Since we don’t have space in the ministry e- records occupy less space compared to paper records”*
- *“They are convenient especially because all of us are connected to the intranet”*
- *“Enhances safety of information compared to manual’*

Though participants gave varying responses, their responses show that they understand the value of e-Records. From their responses it can be said that with material support and training they can improve management of records in the ministries, because they have an idea of its value.

When Records staff were asked if they knew any government initiatives for e-Records management, 25 (36%) did not know of any government initiatives for managing e- Records, 45 (64%) were aware of the planned EDRMS project as shown in figure 5.22. Action officers were asked the same question and 68 (76%) were not aware of any e- Records management initiatives, 22 (24%) were aware of the e- Records management initiatives (see Figure 5.23).

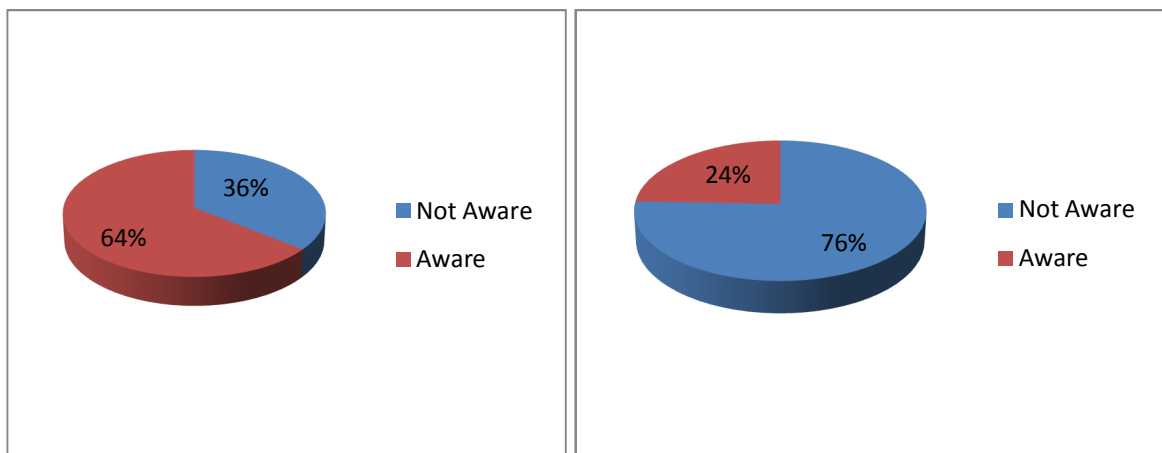


Figure 5.22: E- Records awareness (Registry staff) Figure 5.23: E- Records awareness (Action officers)

These results in figure 5.22 and figure 5.23 showed that there is generally a lack of awareness among registry staff and action officers about government initiatives in management of e-Records, suggesting that there is poor sensitisation of records staff and action officers in ministries on government policies and procedures. It also became evident that there is a lack

of deliberate attempts by SNA to create awareness about the importance of e-Records management among t registry staff.

To determine the attitude towards and the level of awareness of e-Records management among the action officers, Action Officers were asked if they thought managing e-Records was essential in the ministries. All 90 (100%) felt that management of e- Records was essential in their ministries and it is long overdue in terms of implementation. 22 (24%) action officers suggested that SNA should speed up the implementation of EDRMS because there is a shortage of space in the ministries and there is a problem of retrieving files from the registries. The staff showed a positive attitude towards e-Records management and the importance of the level of awareness of e-Records management.

In order to establish the level of awareness of senior government officials about records and their attitude towards sound records management, registry staff were asked how much support in terms of finance and infrastructure development they received from senior government officials. About 56 (80%) of the registry staff indicated that they received minimal support and they all justified the claim by showing the almost non-existent level of training support they received from their ministries. The buy-in from senior government officials is critical in that it would help in terms of improved ownership of records management, thereby making it easy to have access to resources. On the other hand 14 (20%) felt that management had started to show great support for records management since the Principal Secretaries had attended a workshop organised by SNA on the proposed EDRMS system. This they said was evident from their willingness to send them for training.

5.6.2 Status of e-Government in the government ministries

To determine the e-Government awareness, action officers were asked whether they thought the ministries were ready to operate an e-Government. The majority of the respondents felt that ministries had all it takes to operate an e-Government 86 (96%). However, 4 (4 %) indicated that ministries are not ready to operate an e- government as shown in figure 5.24.

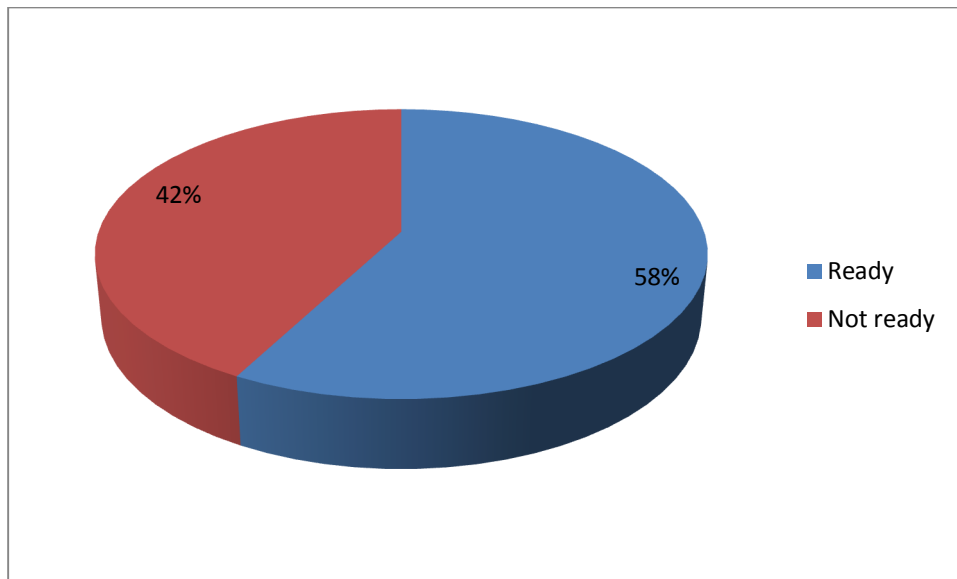


Figure 5.24: Readiness of Ministries to operate e- Government

Fifty two (58%) respondents elaborated on this aspect. These respondents felt the infrastructure for e-Government had been put in place since almost every office in the ministries had a computer with internet connectivity though some registries were still not equipped. Thirty eight (42%) respondents were of the opinion that government and relevant stakeholders should work together to solve the connection problem in order to reduce the high communications/connection costs and once it is resolved, the challenge of reaching the rural areas would be a thing of the past. The ministries could then begin to appreciate the benefit of e-government. The respondents further noted that most of the action officers are computer illiterate or semi-literate let alone having access to the internet. The respondent therefore did not see the possibility of the ministries going completely electronic unless the challenges were addressed.

For more insights into this, the registry staff were also asked whether they thought the ministries were ready to operate an e-government. Their responses were almost similar to those of the action officers. Thirty eight (52%) of the respondents indicated that the ministries are more than ready to operate an e-Government and that all necessary preparations and infrastructure had been put in place. Thirty two (48%) respondents felt that the ministries are not ready to operate an e- Government. The respondents indicated that some of the registries do not have computers and even those with computers are not connected to the internet.

Based on both the responses from the action officers and registry staff, it became apparent that there are challenges that contribute to the implementation of e-Government in the

ministries which included: poor coordinated e-Government strategy; lack of technology/trained IT officers; limited budget; internet access limitations; inadequate equipment in the registries and insufficient trained staff in the registries.

5.7. The depth of government wide digital preservation strategy

The wide digital preservation strategy is a government documented approach to the preservation of e-Records in the ministries. Its purpose is to ensure that access to the government digital archives accessioned by a repository can be maintained indefinitely. In the context of e-Government, a digital preservation strategy is very important given the demands to provide information over time for compliance, accountability, administrative, informational value or even to serve in litigation processes (Ambira, 2016).

5.7.1 Strategies used for preserving e-Records

According to New York State Archives (2011) and National Archives of Australia (2015) preservation of e-Records for the long term has been acknowledged as a challenge especially in view of technological obsolescence. Preservation of e-Records guarantees availability and accessibility of records in the future. Ambira (2016) noted that authenticity of records and their integrity is retained over the period of preservation to be able to provide the required evidence the records were created to capture.

The researcher asked how e-Records were preserved in the government ministries. Table 5.9 shows that all 160 (100%) respondents made printed copies as a strategy for preserving e-Records while (87.5%) respondents used storage devices. Only (15%) respondents reported using ministries servers as a means of preserving e-Records. It was established that (100%) respondents made printed copies that were filed manually as a means of preserving e-records. Making printed copies of e-Records created and received was a means of ensuring that e-Records of long-term value were preserved for future reference. Twenty four (24) respondents who used ministries servers reported that this is a strategy that was introduced by the Department of Computer Services to preserve e-Records of long-term value. The researcher further sought to find out if officers had been taught o how to make backup on the ministry servers. Most of the respondents 136 (85 %) indicated that they were not taught what to do and therefore they just used their own knowledge to save their e-Records.

The Director of SNA explained that *“We are in a process of implementing an EDRMS system which will solve the un-coordinated e-preservation strategies within the ministries and departments.”*

Table 5.9 Strategies used for preserving e-Records (N=160)

Response	No. citing strategy	Percentage
Making printed copies	160	100
Use storage device (CDs, memory sticks, external hard drive)	140	87.5
Server	24	15

***Multiple responses were possible**

The observation checklist (see appendix G) was useful in gathering data on the state of e-Records preservation. The researcher thus observed the following: some ministries do back-up on the same hard drive and where there are secondary servers for back-up they are stored in the same room as the primary server. In some ministries even if there are servers, the work of staff is not saved on the server automatically. In such situations it becomes extremely important that staff do back-up of their work on daily, weekly and monthly bases. In some departments there was a problem of lack of back-up with their in-house system. The server was down and they were failing to back up their records for the whole week. As a result, some officers back-up on memory sticks, while others burn on CDs; others do not back-up at all. The study also established that some officers in the ministries use electronic folders. Once a week they copy from PC to the F drive. Some people work directly on the F drive in case their PC gets corrupted. However, the problem is if the server is down they cannot get access to the records. None of the ministries studied have digital preservation procedures.

5.7.2 E-Records preservation policy

Ngulube (2002) points out that many countries in Sub-Saharan Africa do not have e-Records preservation policies and plans due to lack of expertise and commitment on the part of governments to preserve e-Records and make them accessible to the public.

The researcher sought to find out if the ministries had a preservation policy which guides the preservation of e-Records in the ministries. The majority of the respondents 120 (75%) indicated that such a policy was not in existence and 9 (6%) indicated that there is a policy in about the formulation and implementation of such a policy. 120 (75%) felt that the policy

would help them a lot to change the e- records preservation practice and therefore a preservation policy would be a welcome idea. On the other hand 9 (6%) felt that there was no need since they knew what to do to preserve their e- Records and even if the policy was to be provided it may not change much the way preservation is currently done on the server.

The researcher also wanted to find out from the SNA the current practices regarding the preservation of e-Records. The Director of the SNA explained that, *“There is no e-Records preservation policy and guidelines. Usually where they have e-records, they have a back-up strategy used by the different ministries but we are in a process to develop an e-Preservation policy and guidelines after we have roled out the EDRMS project which is currently being piloted in the Prime Minister’s office and Ministry of ICT”*.

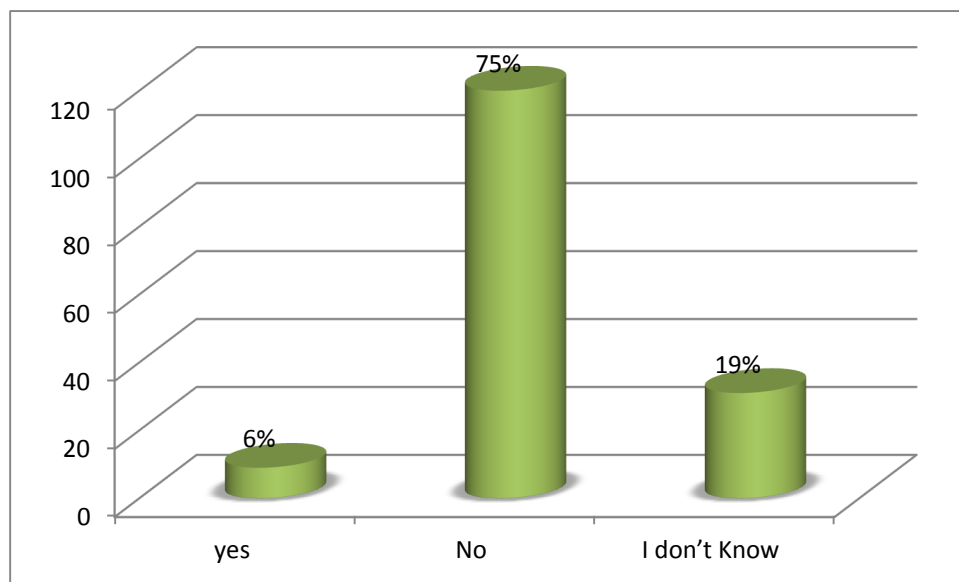


Figure 5.25: E-Records Preservation Policy

5.7.3 Disaster planning and preparedness

As an aspect of preserving e-Records, the researcher sought to know if the government ministries had a disaster preparedness plan to provide a road map for disaster prevention, reaction and recovery of e-Records. The majority of the respondents 120 (75%) indicated that the ministries did not have a disaster preparedness plan while 9 (19%) indicated that they do have a disaster preparedness plan (as shown in figure 5.26). The researcher further wanted to find out if they had an e- Records management programme and they indicated that they did not have such a programme. The absence of a disaster planning and preparedness together with the lack of e-Records management programme shows that in the event that a virus

strikes the different storage devices, the ministries are not prepared and they may lose e-Records and so the ministries' business operations may be affected.

Although through SNA the ministries are trying to preserve manual records, it would seem that much work still needs to be done on e-Records. This will have an impact on continuous availability and accessibility of the e-Records that are essentially for decision making within the ministries. In order to embrace e-Records management, the SNA needs to be capacitated with both material resources, and trained human resources.

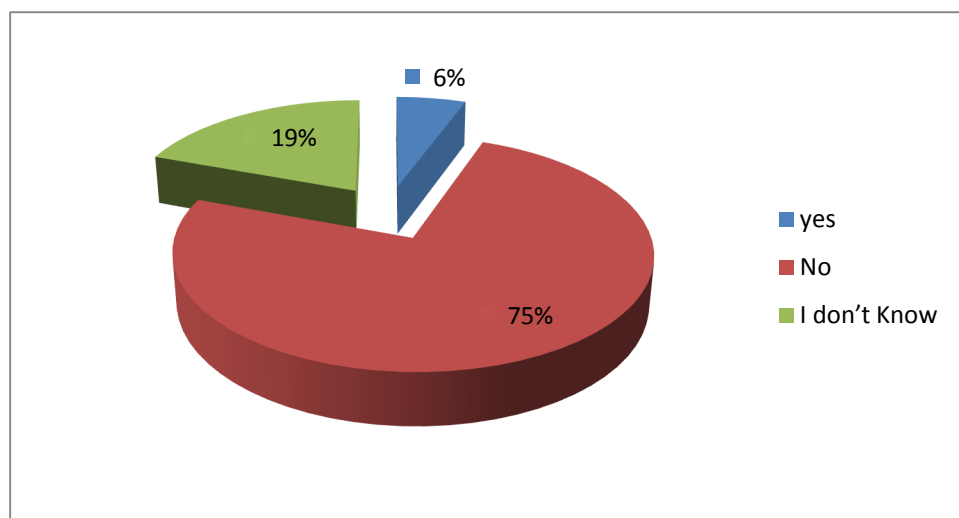


Figure 5.26: Disaster preparedness plan

5.7.4 Safety security and confidentiality of records

The study sought to establish the safety and security control measures of electronic records in the ministries. According to Nengomasha (2009) e-Government requires the protection of individuals' privacy by ensuring that records are protected against unauthorised access. Creation and preservation of trustworthy records requires that records be protected from unauthorised alteration. Table 5.10 shows that all respondents (100%) used passwords to secure and ensure the security and confidentiality of e-Records while 156 (97.5%) respondents used anti-virus. 41% percent respondents backed up information they created and received electronically while 15 (9 %) respondents used burglar proofing to safe guard hardware and software, 72 (98.7%) signing for records by action officers when requesting for records from the registry and 85 (53%) of the respondents lock records in their offices.

Table 5.10: Safety security and confidentiality of records (N160)

Response	Frequency	Percentage
Use of Passwords	160	100
Use of anti- virus	156	97.5
Use of Back up	65	40.6
burglar proofing	15	9
signing for records by officers at registry	72	98.7
Lock in the offices.	85	(53%)

***Multiple responses were possible**

The study observed that physical security in some offices was inadequate and anybody could easily access the e-Records. For example, in some registries there were no counters or burglar proofing to prevent action officers going beyond a certain point. Some action officers rarely used their passwords and those who did, failed to regularly change their passwords which means security was lacking. This in turn, led to unlawful access of e-Records thus, exposing the data to hacking. Viruses were noted to be a security risk to e-Records since some of the computers did not have an anti-virus. Some respondents mentioned that there are many instances where they had lost data due to attacks by viruses and the recovering of this data proved impossible. The study noted that the ministries did not have a disaster preparedness plan for e-Records as mentioned in section 5.7.3. Although some action officers are making efforts to back up the e-Records they created and received, this is done at individual level without necessarily involving the records management units within the ministries.

5.8 Challenges to e-Records management

Respondents were asked to mention the factors that contribute to ineffective and inefficient records management in the ministries. Figure 5.27 shows that 98 (61.25%) of the respondents mentioned untrained records personnel as a factor; 130 (81.25%) said unclear records management policy and procedures in handling electronic records; 102 (63.7%) mentioned inadequate funding dedicated to records management unit; 104 (65%) said inadequate facilities for records management.

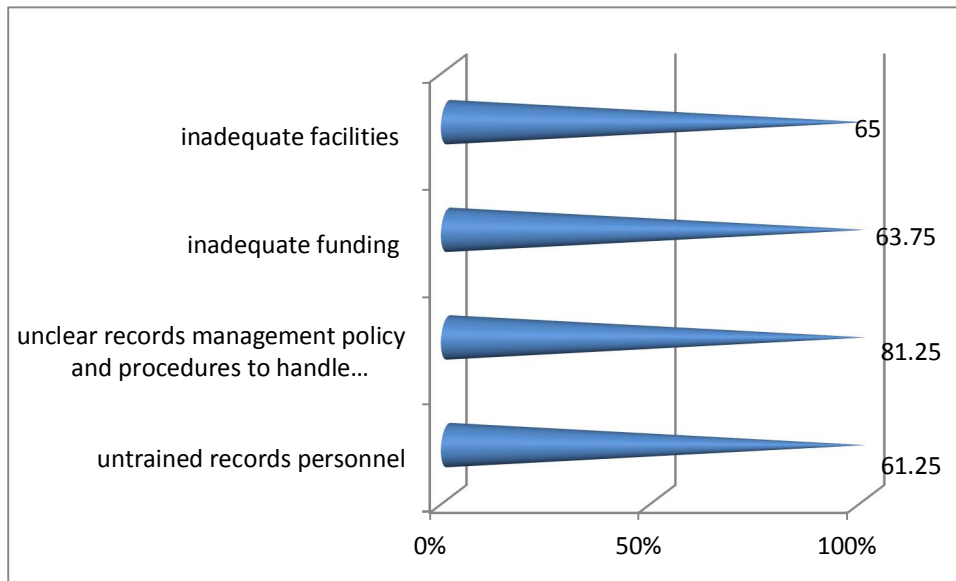


Figure 5.27: Challenges to e-Records management

5.9 Possible solutions to e-Records management

Following the cited challenges, the respondents were asked to suggest what they felt could be done to improve electronic records management. Their suggestions are shown in Table 5.11 and represent the views of action officers and registry officers concerning the possible solutions that could contribute to successful management of electronic records.

Table 5.11: Possible solutions to e-Records management (N160)

Response	Frequency	Percentage
Training of registry staff in electronic records management	156	97.5
Creation of awareness of e-Records to government officers	98	61.3
Increased budget allocation for records management unit	102	63.8
Provision of adequate infrastructure for electronic records	104	65
Enactment of records management policy and procedures	130	81.3

Table 5.11 shows that 156 (97.5%) of the respondents indicated training of registry staff in electronic records management is the solution to the challenges, 98 (61.3%) indicated awareness of e-Records by government officers as a solution. 102 (63.8%) indicated increased budget allocation for the records management unit, 104 (65%) indicated provision of adequate infrastructure for electronic records and lastly 130 (81.3%) indicated enactment of records management policy and procedures.

Of the proposed solutions, training of registry staff in electronic records management was cited by a majority as a factor that could improve the quality and effectiveness of registry staff so as to meet the type of skills needed to manage e- Records. Creating awareness on the value of records management and urgently streamlining the records management practices to meet international standards was also cited as a solution. Lastly increased budget and providing adequate infrastructure would also improve records management.

5.10 Summary

This chapter has presented the research data from the questionnaires, interviews, observation and document search integrated and organised according to the thematic areas of the study. The key findings reveal that the level of e-Records readiness in the government ministries lack behind in some aspects of e-Records readiness as per the IRMT Tool.

It was found that there is a glaring lack of a sound national policy and suitable legislative framework and policy. In addition the creation, maintenance, and long-term preservation of and access to e-Records is left to chance. However, findings further showed that the management of records from creation to disposition still faced many challenges which included: storage space and storage equipment which were inadequate; appraisal and disposition of e-Records was not adequately done; the ministries did not have an e-Preservation policy, neither does it have a disaster preparedness plan. In addition e-Records are not well preserved.

Further, the findings revealed that the ministries had inadequate trained registry staff and that the few had to carry out other duties in addition to records keeping functions such as collect and deliver mail from the post office, relieving switchboard operators and private secretaries leaving the registry unattended. The findings also showed that the staffs were rarely supported to attend records management training. Further the findings revealed top management support of records management was minimal. There was not enough budget allocation dedicated for the records management unit.

The next chapter discusses the findings of the study based on the research questions incorporating the literature.

CHAPTER SIX

DISCUSSION AND INTERPRETATION OF FINDINGS

6.1. Introduction

The previous chapter has presented the research data from the questionnaires, interviews, observation and document search integrated and organised according to the thematic areas of the study. This chapter discusses and interprets the findings of the study in the manner in which they were presented in the preceding chapter. Study findings need to be interpreted in an objective way, before drawing conclusions. The interpretation chapter of the thesis is crucial for the simple reason that the usefulness and utility of research findings lie in proper interpretation (Kothari, 2004:344). Meseh (2015:160) points out that when interpreting data you need to start by explaining the research findings within the context of the theoretical framework and prior empirical knowledge. Nengomasha (2009) also points out that when a researcher discusses and interprets data they must also look at the findings incorporating the literature and specifically best practices from which recommendations are drawn.

The study sought to assess e-Records readiness in the government ministries in Swaziland with a view to conceptualise a framework for the effective management of electronic records as a facilitating tool for e-Government. This chapter discusses and interprets findings following the research questions, addressed as follows:

- What is the national legal and policy framework governing the management of electronic records in government ministries in Swaziland in the context of e-Government?
- Is there any compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries in Swaziland?
- What e-Records management products and technologies exist in the government ministries in Swaziland?
- Is there resource capacity and training for e-Records management staff in government ministries in Swaziland?
- Is there any internal awareness of a link between e-records management with e-Government strategy in the government ministries in Swaziland?

- What is the depth of the government wide digital preservation strategy in the government ministries in Swaziland?
- How can e-Records be managed appropriately in the context of e-Government?

These questions are discussed and interpreted in the following sections:

6.2 National legal and policy framework

The national legal and policy framework reflects how a country intends to manage its records (Parer, 2001). Legislation is the key factor and has a major role in governing records keeping in government entities and employees under these entities. The national legal and policy framework measures are components required to enforce record keeping in the face of problems of handling electronic records. Mampe (2013:4) notes that "some records management laws provide detailed information on how long records should be preserved, as well as how to manage the different formats that records may be stored in". Lipchak (2002) argues that record-keeping legislations are significant in the environment for managing records and the degree to which e-Records are captured and used to support good public administration is also important. Lipchak (2002) perceives that all these depend on a supportive legal framework. Griffin (2003) has observed that in many countries, legislative and regulatory frameworks for managing government records are often weak or out-dated. IRMT (2007:4) argues that "it is significant that there must be appropriate records management legislation in place to provide a compliance framework to ensure that recordkeeping requirements are met". Mampe (2013:4) also points out that "it is important for government entities and their employees to be aware of their legal and regulatory obligations, in order to ensure their compliance with these requirements for records".

The present study revealed that legislative awareness was very limited. About 123 (75%) of the respondents are unaware of SNA Act no.5 of 1971 as a regulatory tool for records in the different ministries, while 40 (25%) of the respondents are aware of the Swaziland National Archives SNA Act which is inclusive of records officers. The majority of the respondents were not aware of the contents of the legislation for records management. Thus, this means that the legislative and regulatory framework provision that exists to make sure that the ministries treat their records with the care they deserve has not been interpreted and promulgated to all officers. Subsequently, this makes it difficult to enforce records management and its requirements. The study established that legislation for records

management, the National Archives Act No. 5 of 1971 (see Appendix H), empowers the Director of SNA to ensure the proper custody, care and filing of archival materials, the inspection and destruction of archives and the transfer of archives from government offices to the national archives, once their active use period has elapsed (Swaziland Government, 1971).

The finding depicts that the records management legislation does not cater for the management of e-Records and related systems to manage records in electronic format. Precisely, the legislation does not avail any specific provision for the management of e-Records. However, with the increased creation of e-Records within the ministries, it is mandatory to provide for e-Records specific characteristics and requirements in a legislative framework. The greatest weakness of the National Archives Act No. 5 of 1971 is that most of its sections deal with archives conservation and preservation, which need broadening in order to address e- records management requirements. The records that now have to be managed and controlled by Swaziland government ministries extend beyond the traditional paper-based records, the records are now also in the form of web pages and multimedia. Beasall (1998:89) states that "electronic records are at the same level with paper-based records. As a result, managing such records is of essential concern since the pattern of how a decision was arrived at needs to be traceable".

According to Ndenje-Sichalwe (2010:126), "the obsolete legislation governing records management in most of the ESARBICA countries makes it difficult to adopt new technologies and implement management strategies pertaining to records". Consequently, "the lack of legislative and regulatory frameworks on electronic records influences the value of e-Records management, access and preservation negatively" (Johare,2001:106). The National Archives of Australia (2015:16) stipulates that "it is essential that an e-Record framework is established in governments to ensure compliance with all relevant legislative requirements". Nevertheless the Swaziland legal framework did not give details as to what good e-Records recordkeeping could be, and this has an effect on the success of e-Government in Swaziland. Nengomasha (2009) also pointed out that the success of e-Government implementation in the public sector requires a converging legal and regulatory environment, which is a pillar for the success of e-Government. Okot-Uma (2002: 5) agrees that "the most essential entity that underlies the functionality of e- Government is the record

that is kept electronically. Therefore, e-Records management has to be strengthened by a comprehensive legal environment.

Other scholars such as Kalusopa (2011) and Nengomasha (2009) also explain that lack of relevant records legislation is a major challenge in the area of e-Records management in the East and Southern African Regional Branch of International Council on Archives (ESARBICA) region. Ketelaar (1985) advises that countries must make new legislative provisions for records and their management so as to cover e-Records. On the other hand, Parer (2001: 7) recommends that any move towards records management legislative change should take into account the electronic environment, convergent technologies, the web environment, web portals and gateways, government online initiatives, e-transactions, and e-business. The case for new legislation is that administrative and technical environment has changed significantly in many organisations with the use of ICT. The study revealed that, although there is a Swaziland National Archives and Records Management Bill of 2010, which captures the total life cycle management of all records regardless of media and format, it is yet to be passed into law as it is taking too long to be implemented.

6.3 Compliance to policies, standards, tools, procedures and responsibilities for records management

The discussions and interpretations of the findings regarding compliance to policies, standards, tools, procedures and responsibilities for records management are presented in this section.

6.3.1 Compliance to policies

It is anticipated that the records management policy would set out a framework within which public records of the Kingdom of Swaziland could be managed in accordance with statutory requirements and international standards. The present study sought to find out whether the ministries had policies to guide the management of e-Records. The findings of the study showed that 88 (53%) respondents from the ministries acknowledged the non-existence of policies for managing e-Records while 23 (14%) respondents acknowledged the existence of policies but did not know the major areas the policy covered. Some 52 (32%) respondents were not sure whether a policy for managing e-Records existed. The study confirmed that a policy for managing e-Records was existent. It was also gathered through interviews with the Swaziland National Archives that SNA was developed and distributed throughout

government ministries as a national records management policy guideline, to help the ministries to develop their own internal records management policies. The present study, nevertheless, confirmed that the guiding national records management policy has however not been used by government ministries. According to IRMT (2004) organisations that implement e-Records management and e-Government services must develop internal policies, procedures and responsibilities for managing records in a form appropriate to its internal organisational structure, culture and resources. Masesh (2015:183) pointed out that 'if an organisation does not have a records management policy in place its readiness is ranked low, in that out of a maximum of twenty points it gets a lower score of five points'. Therefore, the lack of an electronic records management policy and procedures within the Swaziland government ministries is an indication that the ministries are not yet ready to manage e-Records and operate an e-Government. Nengomasha (2009:198) also pointed out that 'the success of e-Government implementation requires a conducive legal and policy framework, which is a backbone of successful e-Government'.

The lack of records management policy and procedures within the ministries could have a negative effect on the continuing Electronic Document Records Management System (EDRMS) and e-Government project. The lack of policy on records management contributes to lack of management commitment on records management, with regards to the development of e-Records management programmes (IRMT, 2004; IRMT, 2007; Moatlhodi, 2015; Mampe, 2013; Moloi, 2006; Tshotlo, 2009). This view is supported by Mnjama and Wamukoya (2007: 11) who share the same sentiments that 'the level of organisational commitment to managing records can be gauged by the existence or non -existence of records management policies and procedures'. On the same note ISO 15489-1 suggest that for organisations to manage their records effectively and efficiently, they must establish, document, maintain and disseminate policies, procedures for records management (ISO, 2016). The objective of the policy should be the creation of trustworthy, reliable and functional e- records. This policy should be capable to backup business functions and activities for as long as they are required. Organizations must ensure that the records management policy is disseminated and implemented at all levels within the organization (ISO, 2016).

Related studies in many government ministries in developing countries such as Swaziland revealed the absence of records management policies and procedures. Research by Tsabedze

(2010) for example revealed that 85% of the respondents in the surveyed ministries in Swaziland did not have records management policies. Similarly, a study by Msibi (2015) on the preservation of public records in Swaziland government ministries established that there was a slight improvement on the availability of records management policies since 42 (73.7%) respondents did not have records management policies in their ministries and departments. This may be a result of the aggressive initiatives by the SNA to distribute the National Records Management Policy (NRMP) to government ministries and departments (Msibi, 2015).

The challenges with records management policies are not peculiar to Swaziland government ministries but also to countries within the ESARBICA region. A study by Sejane (2004) established that in Lesotho Public Sector there are no policies and procedures for managing e-Records hence it was very difficult for record managers to commit themselves fully, to carry out their responsibilities in a proper way. Kemoni (2007) in a study on records management practices in Kenya Public Sector also revealed that there was a non-existence of records management policies and procedures. Another study by Masesh (2015) on records management in Kenyan Judiciary Services established that there was no records management policy. The study also showed that this has a negative effect on the continuing change and move towards openness in the Kenyan judiciary services. Yet another study by Moatlhodi (2015) on E-records readiness at the Ministry of Labour and Home Affairs headquarters in Botswana revealed that there is no policy in place to anchor all records management activities within the ministry.

The absence of records management has some serious implication for records management development in ESARBICA region including Swaziland. For example, it created conflicting scenario in the management of records in the region. For example, the management of records regardless of its medium must be supported by vibrant policies and procedures if the records are to retain their evidentiary value for accountable and transparent governance.

6.3.2 Compliance to standards

Standards provide benchmarks against which records management programmes and systems could be measured (Shepherd & Yeo (2003). According to Ambira (2016:281) standards

play an important role in enhancing universality of management of e-Records especially in the highly digital world with increasing global collaborations and information exchange.

IRMT (2004) posit that these standards need to be well known by registry staff especially as ministries embark upon implementation of e-Records management systems. It is also essential to adopt a national and international minimum standard so that government systems are inter operable and share a common baseline for e-Records functionality.

The findings of the study revealed that ISO 15489: 2001 have been used as a benchmark for developing the Records Management Procedure Manual produced by Swaziland National Archives which is used by the different ministries. In order to make the records management standard ISO 15489: 2001 comprehensible and easy to follow, the SNA has developed a records management procedure manual, which is a guide for the operations of the registries in the different ministries and departments in Swaziland, since it provides registry staff with procedures that are geared towards the attainment of acceptable records management practices (Msibi, 2015). Such standards is important to make sure that government ICT systems consistently create, capture, organise, store, search, retrieve and preserve e-Records and to protect the integrity and trustworthiness of those e-Records (IRMT, 2004).

The fact that ISO 15489: 2001 is the only standard that is used by the ministries for managing records, raises concern with regard to stakeholder engagement in implementation of standards for management of e-Records to support the EDRMS project. It is not clear when the ministries are anticipating adopting standards to accommodate e-Records requirement.

The current study has also established that registry staff in the different ministries and Swaziland National Archives did not monitor records keeping function on a regular basis due to staff shortage as cited by the director of SNA. Registry staff also pointed out that the records management unit is not given first priority by action officers in charge. The Swaziland National Archives submit reports for records surveys to the different ministries but no actions are taken to implement recommendations from SNA. The registry staff indicated that they are powerless in terms of implementing the recommendations because some of the recommendations need senior government officials. The cooperation from senior government officials is critical particularly in an electronic environment because it could have a negative effect on the continuing EDRMS and e-Government project.

6.3.3 Compliance to procedures and tools

Mnjama & Wamukoya (2007:10) argue that records management policy must be supported by procedures and guidelines if they are to retain their evidential values that are needed for accountable and transparent government. The study reveals that there are documented records management procedures manual developed by SNA in 2012 which were meant to be a guiding tool for all government ministries and departments on proper records management practices. However, this study has revealed that the procedures manual caters for physical records and it is silent on e-Records in spite of the EDRMS project. This study has also revealed that compliance to records management procedures and tools is below average. Related studies also revealed that compliance to records management procedures and tools in Swaziland government ministries is below average.

A study by Msibi (2015) for instance revealed that about 65% of the respondents were either not sure, or did not implement records management activities according to a records management standard. However, among the minority that used the records management standard, 14% stated that they were trained about the standard. In 2014 the SNA hosted a records management procedure manual workshop to sensitise stakeholders which includes action officers, registry staff and personal secretaries from different government ministries (Msibi, 2015).

An interview with the Director of SNA also showed that there is below average compliance to SNA procedure and tools. Though the records management procedure manual is an operational tool emanating from the Swaziland National Archives Act no.5 of 1971 it does not cater for the management of e-Records and related systems to manage records in electronic format (see Appendix H). Officers may choose to ignore the procedure manual just because it covers only paper based records. Lack of awareness and poor monitoring of the implementation of the procedures and tools is also found to be another contributing factor to the lower than average compliance levels. This is confirmed by other studies in the ESARBICA region Moatlhodi (2015), Masesh (2015), Kalusopa (2011), Nengomasha (2009) and Sejane (2004).

6.3.3. 1 Records appraisal

Records appraisal is the act of making verdicts on what records are to be created and how long records need to be kept to meet the ministries and department's responsibility. NSW State Records Office (1998) defines records appraisal as a process of evaluating government's business activities to determine which records need to be created and captured into the record management systems. The current study revealed that the ministries did not have a records appraisal programme. It would seem like records in the ministries were not appraised frequently especially when there was no storage space in the registries. The SNA revealed that records appraisal visits to the ministries and departments were not conducted on a regular basis, due to factors such as inadequate qualified records management personnel. This is a drawback to the ministries. For example it is difficult for officers to know the volume of records created; the records location and the records preservation status. It is also a problem to establish the status of the records; that is; those records in the current, semi current and non-current status, and identify those that were due for appraisal and disposition. This contravenes ISO 15489:2016 regulation which recommends that organisations should appraise their records in 'a systematic and routine basis in the course of normal business activity' (ISO, 2016:11).

The lack of resourcing of SNA, in relation to its records management responsibilities is not limited to Swaziland, but affects other member countries in the ESARBICA as well. A study by Ngulube and Tafor (2006) on the 'management of archival institutions in the EASRBICA region' revealed that appraisal of records was done as the need arose because the majority of the countries that were studied did not have an effective programme for records appraisal. A study by Ngoepe (2008) in the 'Department of Provincial and Local Government in South Africa' revealed that the department did not have a well-coordinated programme for records appraisal. A study by Nengomasha (2009) in the 'Public sector in Namibia' revealed that appraisal of records was left to the discretion of the officer in charge of the records. Similarly, a study by Masesh (2015) in the Kenyan judiciary revealed that records appraisal was assigned to the 'archivist' at each court station. Therefore the archivist was expected to serve a whole court station comprising of many registries.

6.3.3. 2 Retention scheduling and disposition

According to Ngulube and Tafor (2006: 67) a retention schedule helps to determine how long records should be kept or how soon they should be disposed of. Aliza Ismail (2009) states that a well-documented records retention and disposal program is crucial to the organization's fiscal well-being, legal survival and business continuity. The RC Model suggests that organizations should have records appraisal and disposition schedule in place to ensure reliability and efficient approaches to the appraisal and disposition exercise.

Forty-one respondents (58.6%) cited that they were aware of retention schedules as the most common instrument used to dispose of records, while 29 (41.4%) were not aware of such legal requirements.

The present study established that most ministries and departments did not have retention schedules. Although 41 (58.6%) respondents claimed that they had heard of retention schedules as the most common instrument used to dispose of records, this is conflicted by data obtained through observation, which indicated that most government ministries and departments did not dispose of their records. Registry staff based their responses on the fact that records disposition may have taken place in their ministries and departments at one point, but not on a regular basis. This was confirmed by SNA personnel, who said that records survey, appraisal and disposal visits were conducted when the need arose, or when resources were available. The archives personnel provide advice to the ministries and departments. However, SNA personnel had not effectively assisted government ministries and departments to develop records retention schedules, which would guide records disposition activities. Perhaps this explains why the majority of ministries and departments lacked records retention schedules and were unable to dispose of records, since it would be impossible to dispose of records without retention schedules. For instance, the researcher observed that storerooms stored closed files on top of their cabinets, and these were to be destroyed or sent to archives. These records compete for space with other materials such as old computers, chairs, vacuum cleaners, fans and heaters. Files in these storerooms were not well-arranged none documented, causing problems when action officers wanted to retrieve records. Most of the time, records in the storerooms were forgotten and remembered only when there was a need to extract information from them. Electronic media is stored in various places such as offices, computer rooms and homes. The study discovered that there is no proper transfer of electronic records. The electronic records management keeping should be the responsibility of the institutions or should rest with the National Archives as has been observed by several

researchers (Abbott, 2001; Chachege & Ngulube, 2006). Some National Archives institutions have fully given e-Records creators the responsibility of managing e-Records. The Australian Archives approach is that e-Records will remain in the custody of the creating agencies and be migrated with current records (Bearman, 1994: 287). Chachege and Ngulube (2006) query whether the ESARBICA archival institutions have the capability to keep electronic records, but at the same time are weary of leaving custody in the hands of the creating institutions considering the poor status of records management in these institutions.

According to Abbott (2001), the National Archives of South Africa keep open reels, cassettes and magnetic tapes but not optical media due to limited resources such as staff and technological infrastructure. The author also noted that the National Archives of South Africa approach is moving closer to the Australian model whereby the responsibility for preservation is placed on the governmental body by means of formal agreement with the National Archives.

The findings of the current study, relating to the absence of retention schedules in most government ministries and departments to guide records disposition support Wamukoya and Mutula (2005) findings. These authors note that one of the challenges faced by archival institutions in the ESARBICA region is management of records related to lack of retention and disposal policies. In another study by Chachege and Ngulube (2006) in the Iringa region of Tanzania, it was established that despite the benefits associated with records retention schedules, most exporting business organizations tended to overlook this aspect of records management. The study showed that only three companies appraised records at the end of the records life-cycle whereas six did it on an ad hoc basis and another six did not appraise their records at all.

Other related studies have identified lack of retention and disposal schedules as one of the major challenges faced by ESARBICA countries in managing public records. A study by Nengomasha (2009) in the Public sector in Namibia discovered the absence of retention and disposal schedules as one of the problems that the public sector faces. Although paper records are not being destroyed, the same cannot be said of electronic records. Congestion in offices and records storerooms was observed, as well as random destruction of electronic records such as e-mail and other documents. E-mails are destroyed, and sometimes this is done following directives from the system administrators to do so, in order to create computer

space. Mnjama (2004) also points out the lack of retention and disposal schedules as one of the challenges that plague management of records in the ESARBICA countries.

The current study findings further revealed that the SNA Act No.5 of 1971 does not have a provision on when the ministries records must be disposed. This legislation only caters for disposal of archives (See Appendix H). The researcher noted that the current legislation should be revised to make provision for when records in different formats should be disposed of and also which records could be kept permanently.

The findings of the present study revealed that most ministries and departments did not dispose of their records on a regular basis. This was confirmed by the Director of SNA, who said that the ministries and departments did not implement professional records management advice given to them, including the appraisal and disposal of records. Some of the reasons advanced by SNA for the non-implementation of records management advice provided to registry staff were the lack of support from their ministries, the low priority accorded to records management in government ministries and the variation of registry staff to other profession such as human resource since the remuneration is better than records management.

This implies that SNA needs to work with government ministries and departments to determine the life span of records. Once the records are no longer needed by their creating agencies, SNA must decide about the disposition of the records; that is, whether or not the records merit continued maintenance and preservation in archives. Mnjama (2006:49) stresses that "disposal of public records is governed by law and therefore public records cannot be disposed of without proper approval". The postponement in approving the disposal of the Swaziland government ministries' records has led to a build-up of records in the registries.

6.3.3. 3. Functional classification scheme

To effectively implement a records management programme for both paper and electronic records requires a records classification scheme (The National Archives and Records Service of South Africa, 2007:30). Raas (1999) laments that without a proper functional classification system in place a governmental body will not be able to obtain a disposal authority.

The current study findings shows that 120 (74%) of the respondents had a written classification scheme, while 43 (26 %) did not. These findings were contrary to what the researcher discovered through the observation technique. Although the majority of ministries and departments had written classification schemes, the classification schemes were not fully documented and updated.

The researcher observed that those respondents who did not use the classification scheme to file their records often relied on their memory to remember each and every file; remembrance of files in this manner is limited. The officers noted that they did not apply the classification scheme because they were never trained on how to use it. The researcher also observed that this created a problem of accessing information contained in records, especially when the incumbents were away from office. Some respondents 15 (9%) shared the view that because of none use of a classification system, decisions could not be taken because of missing files. This results in improper referencing of mail. The study also revealed that only 36 (40%) of action officers referenced their correspondence perhaps due to limited use of any classification system and lack of any procedures for maintenance and use of the correspondence files.

This has implications on information retrieval. The absence of a classification system may lead to misfiling of information and delaying information retrieval, thus compromising the ministries service delivery. In the absence of a classification system, it is a challenge for registry staff to file and retrieve records. Records that are created by the different departments are scattered across more than one record group and likely creates confusion to their access, including access controls, for example determining which officers would access specific types of records.

Previous records management studies highlighted poor file classification systems as one of the problems that face record creators in government ministries in Swaziland. A study by Tsabedze (2011) established that there was lack of awareness of the existence of the functional classification scheme amongst the staff in the ministries. Those who were aware of its existence did not know how to use it. The author suggested that SNA had to influence government ministries and departments to use appropriate functional classification schemes.

The records management principles as suggested by ISO 15489 -1 are not applicable to Swaziland government ministries. The ministries are not complying with basic principles of records keeping such as filing and classification of records. The classification scheme for the ministries is not something that can be used by some officers and others deciding not to use it at all. Nengomasha (2009:217) stresses that "when records are moved from one officer to another, as single entities, without being in files, related records are kept apart. Keeping records together, and in the way, in which they were created, respects one of the basic principles of records management, respect des fondsö.

This implies that the creation of trustworthy and reliable records has been compromised. The action offices were mostly keeping documents and not records in the true sense of the word. Records show the context in which they were created, by being recorded in a functional classification system. The records officers in Swaziland are not applying the principle of original order in most cases. Filing is not done frequently, only effected after a long time when the action officers are clearing their offices. This is a challenge when trying to file the records in the order in which they were received and created.

A study by Kemoni (2007) observes that the majority of ministries in Kenya have written classification schemes but they were not fully documented and updated. In Namibia, Nengomasha (2009) also establishes that 18% of the institutions surveyed in Namibia Public service do not have classification schemes in place; those that have them, the schemes are either outdated or are not in use.

6.3.3. 4. Responsibilities for records management

Organizational recordkeeping is an organized, structured body of responsibility which recognizes the critical mission of a records management program within the organization (Aliza Ismail, 2009). Managing records is essential to ensure that qualified professionals are responsible for the records management programme, individuals, groups or units within the ministries should be assigned roles and responsibilities. This will establish a clear line of authority for records management in the Swaziland government ministries.

The current study revealed that the majority of the action officers in the ministries were not aware that they have a role to perform in managing the records that they create and receive in

the ministries. IRMT (2004) has recommended that institutions that are in the process of implementing e-Government services should start by establishing internal policies, procedures and responsibilities for records and information management in a form appropriate to its internal organisational structure, culture and resources. ISO 15489-1 also suggests that: "Records management responsibilities and authorities should be defined and promulgated throughout the organisation, so that, where a specific need to create and capture records is identified, it should be clear who is responsible for taking the necessary action. The issue of responsibilities for managing records in the Swaziland government ministries is critical, particularly in an electronic environment where the capturing of records relies on the cooperation of all those who create the records within the ministries and departments. The responsibilities should be assigned to all employees of the organisation. Specific leadership responsibilities and accountability for records management should be assigned to a person with appropriate authority within the organisation" (ISO, 2016: 5).

Records management is a complex multidisciplinary function that requires input and responsibility from registry staff, senior management, financial, IT, legal, procurement, human resource management and the rest of staff in different organisational units (Shepherd & Yeo, 2003). The records management responsibilities in the Swaziland government ministries have been fully assigned to unqualified registry officers who do not have the required authority to make decisions regarding records management issues. Kahn (2002: 14) stresses that "records management is a governance and compliance issue which requires stewardship from senior government officials".

The current study also revealed that there is a general feeling that the records management staff is not adequate for management of both electronic and manual records. Similar findings were gathered by Tsabedze (2011) where a records survey at government ministries in Swaziland revealed that the government ministries do not have adequate staff and the capacity to manage records. A recent study done in Swaziland government ministries by Msibi (2015) also confirmed lack of capacity for records management among officers assigned records management responsibility. The current situation in Swaziland government ministries confirms some authors' assertions that there is "low awareness of the role of records management in support of organisational efficiency and accountability"; and that there is "lack of stewardship and coordination in handling paper as well as e- Records" in the public sector in the ESARBICA countries (Wamukoya & Mutula, 2005: 75).

Other related studies have revealed that organisations do not have adequate staff and the capacity to manage e- Records in the ESARBICA countries. Studies by Kalusopa (2011), Mloi (2006), Mosweu (2012), Moatlhodi (2015) and Tshotlo (2009) have revealed that there is lack of capacity for records management in Botswana. In another study by Nengomasha (2009) in Namibia public service, it was revealed that registry staff do not have the required authority to take decisions concerning proper records management issues. Similarly, a study by Sejane (2005) in Lesotho Public service also revealed the lack of capacity in terms of e-Records management skills and competency among officers assigned records management responsibilities.

ISO 15489-1 section 6.3 stresses the significance of assigning responsibilities for records management, maintaining that responsibilities should be assigned to all employees of the organisation, including records personnel, allied information professionals, senior management, systems administrators and others who create records as part of their work, and should be reflected in job descriptions and similar statements (ISO, 2016:5).

The Swaziland National Archives (SNA) procedures state that action officers in all ministries need to be aware that everybody is in some way accountable for records and that responsible behaviour is implemented throughout all relevant operational activities. However, very few action officers are aware that records management is also their responsibility. Such a condition does not create a conducive environment for the creation of trustworthy records.

6.3.3.5 Compliance and monitoring of records keeping in the ministries

Monitoring compliance within the ministries serve as a way of holding individual staff accountable for non-compliance with records management practices. The current study has established that there is non-compliance with the SNA Act No. 5 of 1971. The SNA Act does not have a legal standing, related to the issue to non-compliance. Nengomasha (2009: 218) points out that experiences from other countries seem to suggest that the problem is more of lack of monitoring to establish compliance and recommend measures to ensure conformity than the legal status.

The current study also revealed that there is poor monitoring of the registries functions in the ministries by the officers responsible and the SNA due to shortage of staff as cited by the Director of SNA. Registry staff also raised a concern that senior government officers are not giving the records function activities first priority. The senior government officers normally keep survey reports and recommendations from SNA in their offices and most of the time they do not forward these to the registries for implementation. The staff competence of the people working in the registries has no required power to take decisions on proper records management issues. Nengomasha (2009); IRMT (2003) and Millar (2004) have raised a concern about senior government officials failing to give records management first priority. This occurs at all government levels. This issue of failure by senior government officials to take up and implement their records management responsibilities within the ministries was also discussed in 6.2.3. 4.

6.4. Electronic records management products and technologies

There have been many developments over the past decade with regards to technologies and products for managing e-Records and digital information. These include e-Records Management Application (RMA) software, Electronic Document and Records Management (EDRM) systems, Enterprise Content Management (ECM) systems or Information Lifecycle Management (ILM) systems (IRMT, 2004:10). As noted in the previous chapter five, section 5.4 several technologies and products such as scanning and imaging, forms management, document management, records management, web content management, email archiving, workflow and business process management, collaboration tools, compression, encryption, digital signature systems, data warehousing, backup and archiving systems, storage platform systems and storage media solutions have been developed worldwide for managing e-Records and digital information created in the course of business transactions (IRMT, 2004 :10).

As indicated in chapter 5, section 5.4 the current study has established that some of the technologies that are in place in the government ministries include computers, printers, and scanners, photocopiers, laminators, CDs, CD-ROMs, DVDs, VCDs, Flash drives, cassette recorders and tapes. Others are EDRMS, mobile phones, digital cameras and the internet. Most of these tools used by the ministries are data carrying technologies. Although most of the technologies for electronic records creation were available in the ministries, none of the

ministries had Decision Support System (DSS) and Online Transactional Processing System (OLTPS). Bantin (2002) has identified these systems as the most suitable systems for processing, reducing clerical costs and updating documents. Some of these technologies seem to be common in many public sectors in the ESABIRCA countries as their use has been confirmed through other studies in Lesotho by Sejane (2005), Nengomasha (2009) in Namibia and Asogwa (2012) in Nigeria. A recent study in Botswana conducted by Moatlhodi (2015) has established that some of the technologies that are in place at the Ministry of Labour and Home Affairs include fax, telephone, network computers and photocopying services, internet, email and scanners.

The current study has also revealed that SNA is piloting an EDRM system in the Ministry of ICT and the Cabinet office to effectively manage and preserve government records as corporate memory for future generations. The main aim is to bring uniformity and standardization of electronic records systems and management practice across government ministries and departments. This project draws on the e-Government achievements and ICT capabilities in Taiwan, to assist the Swaziland government to develop an EDRMS. The system will enhance information transparency and facilitate electronic communication between central government ministries, thereby improving government efficiency and decision-making, and support the country in its political, social, economic and cultural development (Swaziland Government, 2015). The implementation of the EDRMS is important for the kingdom of Swaziland in the context of e-Government. However, the implementation of the EDRMS has to be cognizant of other systems that are running in the ministries.

6.5. Resource capacity and training for e-Records management staff

This section discusses and interprets the findings regarding resource capacity and training of e-Records management staff in the government ministries.

6.5.1 Budget allocation to records management unit

The budget allocation for implementing efficient e-Records management system within the ministries is very prohibitive.

With regards to budget allocation to the records management unit, the study revealed that 60 (86 %) of the officers were not aware of any budget allocated specifically to the records

management unit and 10 (14%) were aware of such a budget. Some respondents mentioned that, although they were told that there was a budget allocated for registries, it was difficult to get access to it, even if they requested it. Those who are in management have bad attitudes towards registry staff. They perceive registries as having little importance and manned by an unqualified staff who do not know anything. The budget ends up diverted to other administrative functions such as human resource management and IT. Other ministries indicated that registry activities are not reflected in the ministry budget therefore records management activities are treated as miscellaneous. This means that for an e-Records management programme to succeed. Swaziland government ministries must provide financial and human resources to address these problems of constantly changing technology.

Registry staff also complains that they do not attend records management training and they are always informed that there is shortage of funds for capacity building yet the other departments are always attending workshops and conferences. The Director of SNA is of the opinion that finances may not be a real problem but prioritisation is a major problem. She also noted that there is a lack of commitment from senior management to promote records management initiatives from the ministries and yet this should not be the case.

The major challenge is to cultivate the commitment and support of senior government officials as this would drive implementation of records management related initiatives in the ministries and departments. This challenge concerns obtaining and sustaining commitment and support for records management initiatives among the senior government officials. However, commitment has remained lacking for unknown reasons. The Director of SNA indicated prioritisation as another problem.

This problem faced by the ministries requires senior government official support; commitment and understanding to develop a national vision. There is a need to bring senior government officials on board to support records management projects and oversee their implementation within the ministries.

Swaziland National Archives (SNA) and ministries registries are operating in an environment of decreasing budget, while the responsibilities are increasing. The SNA is disadvantaged in terms of government funding, as government funding is directed to programmes meant to alleviate poverty and HIV/AIDS.

An inadequate budget also has negative financial implications for registry activities such as developing and implementing of records management policies, disaster management programme, appraisal and disposition programmes, training registry staff and purchasing of computers for the registries. The non-implementation of these registries activities is due to inadequate budget. This creates an environment where records are not properly managed and not utilized by action officers.

Swaziland National Archives (SNA) intends to monitor and assist registries to improve their records management practices. However, SNA is equally under-funded to enable it to fulfil its records management responsibilities. Inadequate funding for SNA affects the institution such that it is unable to achieve its mission of preserving valuable records as part of the information resources of the Kingdom of Swaziland through advising ministries on proper records keeping practices. Records cannot be managed effectively and efficiently in the ministries if the SNA does not provide advice to record creating agencies on a continuous basis.

Other related studies have revealed that the majority of members of ESARBICA countries are experiencing problems related to budget allocation. Studies conducted in Botswana by Mampe (2013), Tshotlo (2009) and Moloji (2006), established that records management initiatives are not a priority in terms of funding. Luyomba (2010) in Uganda also found that a few ministries had a funding for ICT and records management activities. Another study conducted by Kamatula (2008) at the University Of Dar Salaam in Tanzania established that inadequate budget hindered the progress on the records management programme.

Mutula and Wamukoya (2009:10) pointed out that one of the critical challenges facing the ESARBICA countries was inadequate funding for records management units by governments. Mnjama and Wamukoya (2004) also established that ESARBICA region is facing challenges due to lack of budgets committed to the records management unit. In such a situation it is very difficult to implement records management activities.

Tafor (2001: 40) indicates that one of the essential aspects that determines and influences the success of any records management programme in an institution is adequate budget allocation. Challenges of budget allocation can also be witnessed when it comes to matters

such as capacity building of registry staff, acquiring appropriate equipment, paying salaries, and other office activities. If records office have to succeed in their mission, budgetary constraints have to be overcome.

Studies show that records management has been a low priority in ESARBICA countries including Swaziland. Instead, senior government officials focus their energies on decisions and actions that benefit them.

Many studies show that in developed countries there is adequate budget dedicated to records management programmes. For example in Australia, e-Records management programmes are effectively implemented because over 80% of the budget is directed to capacity building of records personnel (Asogwa, 2012). This suggests that for e-Records management programme to be successful in the ESARBICA region, far reaching financial and human resources measures have to be available to address these problems of regularly changing technologies.

6.5.2 Competencies and Skills

According to the IRMT e-Records Readiness Tool, relevant skills are required for effective implementation of records management policies in any given organisation (IRMT, 2004:9). The need for staffing and capacity building in records management is one of the significant areas in understanding the depth and breadth of records management (Kalusopa 2011). Wamukoya and Mutula (2005) emphasise that relevant competencies and skills in records management professions are essential for institutions to demonstrate transparency, accountability and a commitment to root out corruption and malpractice. The current study revealed that there is enough staff responsible for records management in the ministries.

Although the present study shows that there is enough staff working in the registries, it is common practice for registry staff in the ministries to carry out other responsibilities in addition to records management roles such as collecting and delivering mail from the post office, relieving switchboard operators and private secretaries in the process leaving the registry unattended.

Swaziland government ministries continue to face challenges of inadequacy of records management skills. The current study shows that there is shortage of skills to efficiently

manage of records, 50 (55.5 %) rated skills of registry staff as average, 6 (6.66%) above average, 30 (33.33%) below average while 4 (4.44%) said they did not know. The majority of action officers rated the competency level of records management staff as average. The lack of capacity on records management in the ministries is clearly confirmed by the finding that most of those managing records in the ministries 50 (71%) had not undergone any education and training in records management in the ministries; only 25 (29%) indicated that they had done so. The study established that certificate level was cited as the highest level of archives and records management professional education received by registry staff; 4(6 %) had received a diploma in archives and records management. The study also revealed that lack of capacity is also caused by the departure of experienced professional staff that looks for greener pastures from the private sector. Some of the registry staff have applied for transfer to other professions such as human resource since the remuneration is better than records management, leaving behind inexperienced graduates.

These findings suggest that there is a huge gap in terms of registry staff numbers in the ministries and competence on records management. Therefore ministries must make sure that empowering records management policies are put in place and registry personnel from the ministries are trained. The IRMT e-Records Readiness Tool component ten (10) suggests that records management personnel have to be trained to manage registries effectively. Shepherd & Yeo (2003) also note that it is imperative for organisations to train their registry staff and to also try to recruit well trained records management staff.

The findings of the current study appear to be similar to those of a study done by Tsabedze (2011) on records management in government ministries in Swaziland which found that there was a shortage of trained registry staff. The study also established that officers appointed to the position of records management in government ministries in Swaziland were not fully trained records managers. The majority of the respondents 60% had OØ level certificates, while 20 % had junior certificates and 20% certificates from records management workshops. Similar findings in Swaziland were established by Msibi (2015), where it was found that 1.8% respondents had a bachelor's degree in archives and records management, 14% had a diploma in archives and records management, 33% had a certificate in archives and records management, while 14% had other qualifications and 35.1 % had no qualification.

This implies that with insufficient qualified registry staff, and the low status accorded to records management work, the standards that should guide records and information work are never included as part of the ministries strategic plans. Availability of trained registry staff and resources therefore becomes an assessable area in determining the ministries e-Readiness.

Other related studies have revealed that members of ESARBICA countries lack core competencies in records management. In a study conducted by Ngulube and Tafor (2006) on management of public records in the ESARBICA countries, it was established that archival institutions in the region were facing challenges of lack of qualified records management personnel. The study indicated that between 40%- 50% of the records management personnel had library and information management or archives and records management qualifications.

A similar study conducted by Nengomasha (2009) on electronic records management in the Namibian public service also revealed that there was a shortage of training of staff leading to poor records keeping in the ministries. The study showed that only 20% had attended some records management training. In yet another study conducted by Nasieuku, Kemoni and Otiike (2011) on management of electronic records at Moi University Kenya, it was established that only 10.6% of the respondents had adequate skills and knowledge in records management. However effective records management in the university was dependent on staff being trained on records management to efficiently manage electronic records.

Similarly a study by Masesh (2015) on records management in the Kenyan judiciary services established that the judiciary services was having a challenge with trained records officers, since there were only 13 trained records officers. The study showed that the records officers in the registries did not have necessary skills and competencies to manage the registries. Lastly a study by Sejane (2004) on Management of electronic records in the public sector in Lesotho established that staff appointed to the position of records officer in the ministries were not fully trained to manage records and could therefore not be entrusted with managing a specialised area like e- records. The study also revealed that 54% of the records officers held matriculation qualification, 15% had diploma in records management and 26% had other qualifications.

Continuous training through refresher courses, workshops and conferences must be encouraged by the ministries. The current study established that registry staff in the ministries did not receive required support to attend short courses and workshops. The registry staff raised a concern that they normally request to attend workshops at the beginning of the year but they receive no response to their request. Shortage of funds from Ministry of public service is cited as the main obstacle why they cannot be sent for training frequently. They revealed that they have been promoted to their current positions because they h joined government employment over ten years ago and know how to operate the registries. The current study also established that 7% registry staff had knowledge and skills in e-Records management while 93% did not. The 7 % respondents who had knowledge and skills in e-Records got the skills from institutions that offered education and training in Archives and Records Management. These percentages are an indication that there is absence of training and awareness on the significance of record management in the ministries.

Other related studies in the ESARBICA countries have revealed that records management personnel are not receiving enough support to attend short courses, workshops and conferences in records management (Masesh, 2015; Ndenje-Sichalwe, 2010 and Ngulube, 2005). A study by Ndenje-Sichalwe (2010) in the Tanzania public sector revealed that 45.8% of the registry staff had attended short courses while 54.2% had not attended any such training. The study also revealed that inadequate training to update knowledge and skills of registry staff had negative effects in fostering accountability in the ministries. The study recommended that registry staff needed to receive continuous training in order to understand policies and guidelines for managing records within the ministries. The study further established that amongst the registry staff themselves they admit that they need training on management of electronic records.

On the contrary, a study by Ngoepe and Van der Walt (2009) on records management trends in the South African Public Sector established that 15.4% of the records officers indicated that training was done during induction of new employees in the public sector. The study shows that about 77% of the respondents indicated that training was offered as a refresher course while 23.1% revealed that they had scheduled training and another 26. 9% indicated that training is offered whenever the need arose. This paints a different picture from other similar institutions in other ESARBICA countries.

Kemoni (2007) notes that effective management of records was dependent upon staff responsible for records receiving education and training in records management.

This current study concurs with the author's view as records and especially e-Records management is a specialized area of records management which one cannot grasp through orientation.

6.6 Internal awareness of link of e-Record management with e-Government strategy

This section discusses and interprets the findings regarding internal awareness of the link of e-Record management with e-Government strategy. The IRMT (2004:12) e-Readiness tool maintains that senior management and action officers need to be aware of the importance of trustworthy and well managed records for delivering effective records and information services and protecting institutional accountability and integrity. This together with records and information management policies, procedures, tools and resources would result in sound records management. Records management policies, procedures and tools will be ineffective unless there is a commitment among internal staff to implementing them. (IRMT, 2004:10).

Thus, the survey further sought to examine the extent to which the action officers were afforded records management sensitization. The assessment shows that the majority (56%) indicated that it was never done. However, 7% indicated that sometimes they are sensitised. An interview with the Director of SNA confirmed that sensitisation is rarely done and she cited lack of human resources as a major obstacle. This finding is related to the finding on level of compliance to procedures where it was established that compliance to records management procedures is below average. These findings show that the below average level of compliance to policies and procedures emanates from lack of effort to conduct records management awareness campaign to the ministries by SNA. The finding shows that the level of awareness about records management programme was low at the time of the study. According to Mnjama & Wamukoya (2006) awareness of records management in government ministries and departments in African countries is a concern and therefore there is a need for capacity building through raising awareness and training. The current study findings are similar to those of Tsabedze (2012) who revealed that there is lack of awareness

of records management policies, standards and procedures in government ministries in Swaziland.

Studies by Kalusopa (2011) in Botswana and by Nengomasha (2009) in Namibia found this trend in the public sector. Both stress that implementation of a records management programme can only be successful if there are regular awareness campaigns among records officers and action officers. Masesh (2015) also found out that lack of awareness of internal records management programme was evident within the Kenyan judiciary. Other studies confirming lack of awareness on records management include those conducted by Moatlhodi (2015), and Mampe (2013). They recommend that institutions need to often sensitize all internal stakeholders, so that the uptake and compliance to policies and records management procedures can be improved.

6.6.1 Status of e-Government in the government ministries

Sheridan and Riley (2006) argue that trying to introduce e-Government when there is no e-Records readiness is as good as wasting money and other valuable resources. Nengomasha (2009) accentuates that when the government embarks on e-Government there tends to be an increase in the use of electronic records as well as an improvement in government's dependence on electronic information.

The main assumption of the current study was that Swaziland government ministries had already rolled out an e-Government, which then leads to an increase in electronic records creation within the ministries and departments. The study also investigated the status of e-Government in the ministries and it established that the ministries were at the initial phase as regards e-Government implementation.

The current study also established that Swaziland government ministries were just starting to be prepared for the implementation of e-Government services by way of putting in place the necessary infrastructure and operating administrative functions of the ministries electronically.

The majority of the action officers keep their records in their offices whose existence no one else knows about. No procedures are followed when action officers file documents which

include electronic records where the use of folders and naming conventions is not systematic. The e-Records were neither well-arranged nor well documented, causing problems when action officers wanted to retrieve records. The findings indicate that there is no standardised procedure put in place for the effective management of e-Records across Swaziland government ministries. This can be attributed to the general practice that most e-Records (including e-mails) were created and then filed as paper-based records. Such a situation is not good especially if the e-Records will exist as corporate memory of those ministries. The study also observed that each office that created e-Records had its own way of maintaining, retrieving, and storing the electronic records.

Previous related studies showed that African countries are still lagging behind in as far as e-Government is concerned. Bannister (2007) for example, observed that countries in the sub-Saharan region were still in their infancy stages of development with regards to e-Government. Bwalya (2011) also noted that African countries such as Botswana, Kenya, Uganda, Tanzania, Mozambique and Ghana are still at their initiation stages of implementing e-government. A study by Nengomasha (2009) also revealed that e-Government initiatives are still at an early stage in the public service of Namibia.

The current study findings also showed that the government ministries in Swaziland were faced with challenges that included: poor coordinated e-Government strategy; lack of technology/trained IT officers; limited budget; internet access limitations; inadequate equipment in the registries and insufficient trained staff in the registries. Heeks (2002:67) points out the necessity for government support to ensure that there is management support, adequate infrastructure, qualified and capable IT staff and support before the implementation of e-Government programme.

Ndou (2004) has pointed that in an e-Government environment, new procedures, policies, laws and legislative changes. Ebrahim and Irani (2005) also stress that there are many challenges experienced by governments in Africa that prevent the adoption of e-Government projects: insufficient IT infrastructure, internet; inadequate security with regard to personal data; scarcity of IT skills; organizational culture and individual attitudes within the organization; a centralised government budget that is difficult to control. Furthermore Choudrie, Weerakkody and Jones (2005) identified digital divide and lack of trust and security of personal data as major weaknesses of e-Government. The authors also point out

that lack of internet and broadband connectivity restricts citizens from accessing e-Government services in rural settings in the UK.

Based on the evidence from the given existing literature and findings of the current study, it is evident that the government ministries in Swaziland have problems that need to be solved if the e-Government initiative is to be effectively executed. The current literature review shows that developing countries, Swaziland included have a great potential for successful implementation of e-Government. Mutula (2013:18) for example indicates that "with mobile penetration growing significantly in sub-Saharan Africa, e-Government projects should leverage these new technologies, including social media applications to provide citizens with the opportunity to obtain services or information timeously".

6.7 The depth of government wide digital preservation strategy

This section discusses and interprets the findings on the depth of government wide digital preservation strategy. The current study established that Swaziland government ministries did not have a digital preservation strategy. Moreover, the officers seemed not to be aware of the role that a preservation strategy would play in the ministries. The majority of the respondents 120 (75%) indicated that such a policy was not in existence, 9 (6%) felt that there was no need for such a policy and 34 (19%) were not aware of the existence of the policies. Msibi (2015) pointed out that the lack of awareness about preservation strategies has a negative impact on records management practices in the government ministries. Munetsi (2011) also stresses that the public sector needs to be aware of their policies and procedures and must ensure compliance with the regulatory environment for records.

The current results are similar to Msibi (2015) who established that 73.7% respondents indicated that their ministries did not have policies relating to preservation of records. Another study conducted by Tsabedze (2012) revealed that 85% of the respondents in the surveyed ministries in Swaziland did not have records management policies. The results in the current study show a slight improvement, since it recorded 75% respondents that did not have preservation policies in their ministries compared to Tsabedze (2012) which showed 85%. This may be a result of the aggressive initiatives by the Swaziland National Archives to distribute the National Records Management Policy (NRMP) to all government ministries and departments (Msibi, 2015).

A study by Kalusopa (2011) on development an e-Records readiness framework for labour organisations in Botswana revealed that most labour organisations faced major problems of digital preservation. Another study by Ngulube (2003) on preservation and access to public records and archives in South Africa established that, the majority of the institutions that were surveyed supported some preservation activities, but that not all of the functions could be identified as part of a formal preservation programme based on clearly articulated policies.

The IRMT (2009) notes that a clearly documented preservation strategy is crucial for a preservation programme. If a preservation strategy were to be developed, it would help to address the following: it would provide a statement of intention that supports preserving of the records; serves as an action plan of preservation managers; show to officers that preserving records is vital to the organisation; in addition, it could be used to request funds from other organisations; and lastly it would aid as a training tool for both the registry staff and action officers. Akussah (2011) stresses that institutions should formulate records preservation strategies in order to support the preservation of records and other information materials to ensure their continued access.

6.7.1 Disaster planning and preparedness

Disaster planning and preparedness is another aspect that is important for preservation and protection of records and also for the records to be accessible in times of disasters. These assist organisations to quickly respond to an emergency. Przybyla and Huth (2004), defined disasters as unexpected incidences that significantly destroy records or prevent access to the information they contain. Nsibirwa (2012:199) cautions that öit is essential to take preventative measures to avoid unnecessary human-made disasters, as well as being prepared for natural disastersö.

The key feature to disasters is that they pose a threat to the physical safety and integrity of records. The establishment of a proper disaster preparedness plan is essential to archival institutions to minimize the impact of disasters. Therefore archival institutions should incorporate a disaster plan into the larger records management activities.

The findings of the current study established that the majority of respondents 120 (75%) indicated that the ministries did not have a disaster preparedness plan while 9 (19%) indicated that they do have disaster preparedness plan. The nonexistence of a disaster management plan poses the risk of losing valuable records in the ministries and departments.

The findings of the current study are also similar Msibi (2015) and Tsabedze (2012) both of whom established that the Swaziland National Archives did not have a disaster management strategy in place and therefore Swaziland government ministries are ill prepared to handle disasters. The absence of a disaster plan therefore spells doom for records in the Swaziland government ministries should a disaster occurs.

Recent research by Masesh (2015) shows that the Kenyan judiciary services do not have a disaster preparedness plan despite the fact that disasters caused by fire in some stations have been reported. Another study by Ngulube (2005) cited a similar scenario, where archives institutions in the ESARBICA region had neither a disaster preparedness policy nor security plans. The author also pointed out that a disaster preparedness policy and security plans of records did not form a major part of the preservation activities of archival institutions in many organizations in Africa.

6.7.2 Safety security and confidentiality of records

The introduction of ICT has affected and gradually impacted the way the Swaziland government ministries preserves records in their custody. To determine the safety, security and confidentiality of records within the government ministries, the researcher looked at security in terms of virus infections, back-up practices and access level and permission to paper and e-Records including computer files. Nengomasha (2009:215) indicated that "Government requires the protection of individual privacy by ensuring that records are protected against unauthorised access". Wamukoya and Mutula (2005:12) have also indicated that "it is essential for governments to have records security controls in place to ensure the safety of both hardcopy and electronic records".

The current study revealed that the security system that administers checks and controls for both paper and e-Records did not exist in the ministries. Some action officers rarely used their passwords and those who did, failed to regularly change their passwords which means security was lacking. This has in turn, led to unlawful access to e-Records thus, exposing the

data to hacking. Viruses were noted to be a security risk to e-Records since some of the computers did not have an anti-virus. Some respondents mentioned that there are many instances where they have lost data due to attacks by viruses and the recovering of this data proved impossible. The current study has established that poor safety and security measures are a major risk to government corporate memory. This implies that the databases containing government and individual records for example may be extremely useful to the individuals themselves, but without proper security protections that information may also be accessed by others, thereby threatening the privacy of the owners. Nowadays, people have an inherent right to privacy that can be violated, intentionally or by accident, in an electronic environment.

The current study findings are similar to a study by Luyombya (2010) on framework for effective public digital records management in Uganda which showed that there is no security system that administers checks and controls for both paper and e-Records in the Uganda Public Service. The action officers were concerned about privacy of information, how to protect unauthorised access and how to prevent users from one office accessing or viewing records of another office.

6.8 Summary

This chapter offered an interpretation and discussion of the research findings. This was done in the light of the research objectives, existing records management theories and literature. The chapter therefore, discussed and interpreted the findings presented in chapter five, and provided implications for the study based on the previous records and information management research and practices.

The study established that the level of e-Records readiness in the government ministries is at an infant stage. This is reflected by weak legislative and policy framework and that there are neither agreed standards nor procedures to ensure that records are created and maintained in electronic format in the ministries.

The study also established that lack of qualified registry staff to manage records regardless of its medium is a big problem across the ministries and departments. The shortage of staff with records management skills has been identified as a major issue hindering the development of records management in the ministries. Moreover, registry staff are not given enough support to attend records management training for purposes of professional growth and progression.

Furthermore, there is lack of senior management will and commitment to the implementation and support of e-Records management programme in the ministries. This discourages the funding of registries activities. Lastly the study also revealed that there are disjointed, haphazard and poor approaches to the management of government e-records, poor back-up procedures, lack of preservation strategy and disaster preparedness plan. The respondents were unaware of any guidance about electronic records.

The next chapter (chapter seven) provides a summary conclusion, and recommendations for the government ministries in Swaziland on how they could solve the challenges outlined. It also proposes an appropriate framework for examining and understanding e-Records readiness in the government ministries in Swaziland.

CHAPTER SEVEN

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The previous chapter discussed and interpreted the findings of the study. This chapter summarizes the interpreted study findings and proposes recommendations in the form of a framework for management of electronic records in the context of e-Government strategy in Swaziland. The aim of the study was to assess e-Records readiness in government ministries in Swaziland with a view of conceptualising a framework for the effective management of e-Records as a tool to facilitate and realize e-Government. The study addressed the following research questions:

- What is the national legal and policy framework governing management of electronic records in government ministries in Swaziland in the context of e-Government?
- Is there any compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries in Swaziland?
- What e-Records management products and technologies exist in the government ministries in Swaziland?
- Is there resource capacity and training for records management staff in government ministries in Swaziland?
- Is there any internal awareness of a link between e-Records management with e-Government strategy in the government ministries in Swaziland?
- What is the depth of government wide digital preservation strategy in the government ministries in Swaziland?
- How can e-Records be managed appropriately in the context of e-Government?

7.2 Summary of the interpreted findings

This section summarises the study findings discussed and interpreted in the previous chapter.

7.2.1 National legal and policy framework governing management of electronic records in government ministries in Swaziland

The first objective of the study was to establish whether there was a national legal and policy framework governing management of electronic records in government ministries in Swaziland. Legislation is the key factor and has a major role in governing records keeping in government entities and employees under these entities. The national legal and policy framework measures are components required to enforce record keeping in the face of problems of handling electronic records. This study found out that the National Archives Act of no.5 of 1971, is the main law that empowers the Director of Swaziland National Archives. It is to ensure the proper custody, care and filing of archival materials, the inspection and destruction of archives and the transfer of archives from government offices to the national archives, once their active use period has elapsed. In light of this, it is quite disturbing to note that there exists no national records management Act to guide the effective management of e-Records. The greatest weakness of the National Archives Act No. 5 of 1971 is that most of its sections deal with archives conservation and preservation which obviously need broadening in order to include e-Records management requirements. The records that now have to be managed and controlled by Swaziland government ministries extend beyond the traditional paper-based records into web pages and multimedia forms of records. The study also revealed that there is a National Archives and Records Management Bill of 2010, which captures the total life cycle management of all records regardless of media and format which has to be passed into law. The glaring lack of suitable legislative framework, the creation, maintenance, and long-term preservation of and access to e-Records is left to chance. Lack of national legal framework governing management of electronic records affect their value in terms of management (access) and preservation negatively (Johare, 2001). The Swaziland National Archives Act no.5 of 1971 is in need of revision to accommodate e-Records keeping. However, very few action officers and registry staff are aware of the Act.

The study also sought to find out whether the ministries had policies to guide the management of e-Records. The study confirmed that the records managing policy was existent but it does not fully address the management of e-Records. The study established that

the Ministry of ICT has developed an ICT Policy and e-Government strategy, but that this policy does not address electronic record keeping. The e-Government strategy emphasises that it is a vehicle for national economic and social development by ensuring effectiveness, efficiency, transparency and accountability on the part of the government, but it does not indicate whether government ministries in Swaziland are e-Records ready for the purposes of use in the implementation of e-Government. On the other hand the policy addresses issues such as, the ICT infrastructure policy, policy compliance and sustainability and procurement, maintenance and disposal of ICT infrastructure and systems. To enhance the management of e-Records in the government ministries the ICT policy and the e-Government strategy should include strategies for the creation, receipt, use and maintenance, storage, security and integrity and disposal of e-Records. Such strategies will guide Records officers and Action officers in the proper management of e-Records from creation to disposition. Without a strategy or policy in place it becomes difficult for the ministries to manage records in an electronic environment.

7.2.2 Level of compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries in Swaziland

The second objective sought to assess the level of compliance to policies, standards, tools, procedures and responsibilities for e-Records management in the government ministries in Swaziland as per the IRMT e-Records Readiness Tool. The study revealed that there is hardly any compliance to the policy since most of the ministries did not have an e-Records management policy. The lack of an electronic records management policy within the Swaziland government ministries is an indication that the ministries are not yet ready to manage e-Records and operate an e-Government.

Swaziland National Archives has not adopted any international standard on management of electronic records. The findings show that only ISO 15489:2001 standards have been used as a benchmark for developing the Records Management Procedure Manual produced by Swaziland National Archives which is meant to be a guiding tool for all government ministries and departments on proper records management practices. However, the study has revealed that the procedures manual that has been developed by Swaziland National Archives to improve records management within the ministries are not sufficient to cover the requirements for management of electronic records within the ministries. The study also

revealed that ministries are not compliant with basic principles of records keeping such as filing, classification, appraisal and records disposal.

7.2.3 Electronic records management products and technologies

The third objective of the study sought to establish whether e-Records management products and technologies were in existence within the ministries. The study revealed that most of the technologies for electronic records creation were available in the ministries such as networked computers, printers and photocopies, email, scanners, laminators and telephones. Although the technologies for electronic records creation were available in the ministries, none of the ministries had a system that would capture and register electronic records such as the Decision Support System (DSS) and the Online Transactional Processing System (OLTPS). These systems are most suitable systems for processing, reducing clerical costs, and updating documents. It has also been established that there is an EDRMS system to be piloted in the Ministry of ICT and Cabinet office to effectively manage and preserve government records as corporate memory for future generations. It is envisaged that this proposed system will bring uniformity and standardization of e-Records systems and management practice across government ministries and departments.

7.2.4 Resource capacity and training for records management staff

The fourth objective of the study sought to find out the level of capacity of resources and training of records management staff.

The findings showed that the majority of the registries within the ministries did not have designated areas for keeping records. The records storage functioned more as a dumping ground for records. No procedures were followed when records were deposited into the records storage. It was observed that in the records storage, records were competing for space with other materials such as old computers, chairs, vacuum cleaners, fans and heaters. Files in these records storage were neither well-arranged nor documented, causing problems when action officers wanted to retrieve records. Most of the time, records in the records storage were forgotten and remembered only when there was a need to extract information from them.

The findings also revealed that most of the action officers preferred to keep their records in their offices and requests for records in the registry were very rare. The action officers noted that they were not using the registries because files got lost in the registries; consequently, it

was safer to keep current records in their offices and take those that they did not need to the registries. Perhaps this is because they found it much easier and faster to access them in their offices. The action officers frequently transferred records to the registries when they no longer used them, effectively using the registry as a storeroom, when in fact a registry is the place where files and other records are processed, kept and retrieved.

The study further revealed that there is inadequate budget allocated specifically for the records management unit. Although there is a budget allocated for registries, it was difficult to get access to it, even if registry staff requested it. The study has established that those who are in management had a bad attitude towards registry staff. They perceived registry staff as having little importance and as unqualified staff who did not know anything. The budget ended up diverted to other administrative functions such as human resource management and IT. Other ministries indicated that registry activities are not reflected in the ministry budget therefore records management activities are treated as miscellaneous. Registry staff also complained that they do not attend records management training and they are always told that there is shortage of funds for capacity building yet the other departments always attend workshops and conferences. The Director of SNA was of the opinion that finances may not be a real problem but prioritisation was a major problem. She also noted that there is a lack of commitment from the senior management to promote records management initiatives from the ministries.

There are no skills for managing e-Records within the government ministries in Swaziland and SNA itself. The study showed that the ministries in Swaziland did not have adequately trained records management staff. The majority of the registry staff do not have formal qualification in archives and records management and are at a level too low to be able to manage corporate memory of the ministries. The lack of capacity is also caused by the departure of experienced professional staff who look for greener pastures from the private sector. Some of the registry staff have applied for transfer to other professions such as human resource since the remuneration is better than records management hence leaving behind inexperienced graduates. These findings suggest that there is a huge gap in terms of registry staff numbers in the ministries and low competence in records management.

7.2.5 Internal awareness of link of e-Record management with e-Government strategy

The fifth objective of the study sought to find out the level of internal awareness of the link between e-Record management to the e-Government strategy in Swaziland government ministries. The study established that there is low awareness of records management programmes as the sensitization of staff on records management is not done regularly because human resources availability is a major obstacle. This finding is related to the finding on level of compliance to procedures, where it was established that compliance to records management procedures is below average. These findings show that the below average level of compliance to policies and procedures emanates from lack of efforts to conduct records management awareness campaigns for the ministries by Swaziland National Archives. The findings also show that the level of awareness about records management were low at the time of the study. The study also established that the ministries were at the initial phase as regards e-Government implementation. Swaziland government ministries were just starting to be prepared for the implementation of e-Government services by way of putting in place the necessary infrastructure and operating administrative functions of the ministries electronically. The study showed that though e-Government was being planned, there are challenges that contribute to the implementation of e-Government in the ministries which include: poor coordinated e-Government strategy; lack of technology/trained IT officers; limited budget; internet access limitations; inadequate equipment in the registries and insufficient trained staff in the registries

7.2.6 The depth of government wide digital preservation strategy

The sixth objective of the study was to establish the depth of government wide digital preservation. The findings of the study revealed that the government ministries did not have a digital preservation strategy that supports the preservation of records and other information materials to ensure their continued access. Equally, the staff seemed unaware of the role that such a strategy would play in helping in preserving the e-Records if it were in place (see Chapter 5 section 5.7.2).

The findings also showed that the government ministries did not have a disaster preparedness plan. The absence of a disaster planning and preparedness together with the lack of an e-Records management programme shows that viruses were noted to be a security risk to e- Records since

some of the computers did not have an anti-virus. There are many instances where data was lost due to attacks by viruses and the recovering of this data proved impossible. Although some action officers are making efforts to back up the e-Records they created and received, it was done at individual level without necessarily involving the records management units within the ministries.

7.3 Conclusions

This section provides conclusions based on the major research findings of the study. The conclusions were drawn in the order in which the research questions were stated in chapter 1 section 1.5.3.

7.3.1 Conclusion on national legal and policy framework governing management of electronic records

The national legal framework for managing records is in place in the form of Swaziland National Archives Act of no.5 of 1971 (see Appendix H). This legislation does not avail any specific provision for the management of e-Records. However, with the increased creation of e- records within the ministries, it is mandatory to provide specific characteristics and requirements in a legislative framework for e-Records. The greatest weakness of the National Archives Act No. 5 of 1971 is that most of its sections deal with archives conservation and preservation which obviously needs broadening in order to address e- records management requirements. The records that now have to be managed and controlled by Swaziland government ministries extend beyond the traditional paper-based records into web pages and multimedia forms of records. The revision of the Archives Act will go a long way towards capturing the total life cycle management of all records regardless of media and format.

It is anticipated that the records management policy would set out a framework within which public records of the Kingdom of Swaziland could be managed in accordance with statutory requirements and international standards. The study showed that most of the ministries did not have records policies to manage their e-Records. The result is that government ministries in Swaziland are not practising proper records management in line with well documented records management policies. Mnjama and Wamukoya (2007) note that the management of records regardless of its format must be supported by well documented policies, procedures and guidelines. There are no written policies in the ministries to improve digital preservation. Akussah (2011) stresses that institutions should formulate records preservation strategies in

order to support the preservation of records and other information materials to ensure their continued access.

7.3.2 Conclusion on level of compliance to procedures, tools and standards

The study also revealed that adherence to records management procedures, tools and standards is below average. Swaziland National Archives has not adopted any international standard on management of electronic records. The findings show that only ISO 15489:2001 standards have been used as a benchmark for developing the Records Management Procedure Manual produced by SNA which is meant to be a guiding tool for all government ministries and departments on proper records management practices. However, the study has revealed that the procedures manual does not cover the requirements for management of electronic records within the ministries. The ministries are also not complying with basic principles of records keeping such as filing, classification, appraisal and disposal of records.

7.3.3 Conclusion on competencies and skills for managing electronic records

The findings of the study on competencies and skills among registry staff established that the ministry did not have adequately trained registry staff that has experience in terms of theory and practice of managing e- Records. The majority of the registry staff does not have formal qualifications in archives and records management and are at a level too low to be able to manage corporate memory of the ministries. This is attributed to the fact that the ministries have not made enough effort to address the management of e-Records due to lack of competencies and skills, knowledge and resources. Wamukoya and Mutula (2005) note that relevant competencies and skills in the records management profession are essential for institutions to demonstrate transparency, accountability and a commitment to root out corruption and malpractice. Kemoni (2007) also noted that effective management of records was dependent upon staff responsible for records receiving education and training in records management. The author concurs with this view as records and especially e-Records management is a specialized area of records management which one cannot grasp through orientation.

7.3.4 Conclusion on the level of awareness and attitude towards records management in the government ministries

This study revealed that records management was not rendered full support by the senior management in the ministries in terms of budget allocation, capacity building for registry staff and infrastructure development for the registries. Senior management perceive the registry staff as unimportant and unqualified staff with very little knowledge. The budget for registries ends up diverted to other administrative functions such as human resource management and IT. At the time of the study for example some ministries indicated that registry activities are not reflected in the ministry budget therefore records management activities are treated as miscellaneous. It would seem senior management did not understand the value of sound records management in the ministries. Sound records management in the ministries however, can lead to greater efficiency, effectiveness and economy in the ministries.

7.3.5 Conclusion on depth of government wide digital preservation strategy

The study also revealed that Swaziland government ministries did not have a digital preservation strategy. Moreover, the officers seemed not to be aware of the role that a preservation strategy would play in the ministries. The majority of the respondents indicated that such a policy was not in existence. Msibi (2015) pointed out that the lack of awareness about preservation strategies has a negative impact on records management practices in the government ministries in Swaziland. Munetsi (2011) also stresses that the public sector needs to be aware of their policies and procedures and must ensure compliance with the regulatory environment for records.

7.3.5 Overall Conclusion on the Research Problem

The aim of the study was to assess e-Records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government. The study established that the level of e-Records readiness in the government ministries is at an infant stage. E-Records management is disjointed, haphazard and poorly handled. Staff display poor records management skills and there is lack of professional training of staff, a weak legislation and policy framework, absence of a disaster preparedness plan, slow progress in the implementation of EDRMS and low capacity building as records management staff is rarely taken for training. There is also

inadequate senior management support. The study has also revealed that opportunities for increasing the depth of e-Records readiness exist such as: availability of financial resources for EDRMS project. In view of these, the study makes the recommendations below on how management of e-Records could be improved in the government ministries in Swaziland.

7.4 Recommendations

Based on the research findings of the study, the interpretation thereof and conclusions presented above, the recommendations presented below cover: national legal and policy framework; compliance to policies, standards, tools procedures and responsibilities; e-Records management products and technologies; resource capacity and training; internal awareness and preservation strategies.

7.4.1 Recommendation: National legal and policy framework governing management of electronic records in government ministries in Swaziland

The findings of the study have revealed that the management of electronic records falls below expected standards as evidenced by the weak legislative and policy framework. The key findings of this study noted that obtaining the Archives Act of 1971 did not fully provide for the effective management of e-Records in Swaziland government ministries and departments. The lack of a legal framework for electronic records undermines their value in terms of management, access and preservation (Johare, 2001). It is therefore recommended that:

- There is an urgent need to fast track the amendment and passing into law of the proposed National Archives and Records Management Bill of 2010 by the Director of Swaziland National Archives, which captures the total Life Cycle management of all records regardless of media and format.
- National Records Management Policy be formulated by Swaziland National Archives to regulate and streamline the effective management of e-Records so that they can survive as corporate memory of Swaziland government transactions just as paper based records have been treated all along.
- SNA should facilitate the development of records management policies for the ministries which should include the management of e-Records in e-Government, requirements for systems for managing electronic records, preservation of electronic records, common data to be shared across the ministries, ICT infrastructure requirements for managing electronic records and email management. As noted by Hounsome (2001), and the State of Montana (2002), the lack of records management

policies and procedures culminate in poor records management processes. It is therefore imperative for the Swaziland Government to come up with a strong national records management policy. ISO (2001) notes that institutions such as government ministries with a records management policy in place, will be able to create and manage reliable, authentic and usable records capable of facilitating speedy decision making in the ministries. By formulating a records management policy, the government ministries will be showing their commitment to records management (Mnjama and Wamukoya, 2007). Tsabedze, (2012) also recommended the enactment of records management policies in government ministries in Swaziland which would facilitate the development of training plans and putting in place records management programmes.

- Ministries should be encouraged by Swaziland National Archives to ensure that records users (Action officers) are made aware of the national legislation and policies for records management as it has direct implications for daily use and management of records.

7.4.2 Recommendation on compliance to policies, standards, tools procedures and responsibilities

The study has revealed that government ministries did not have internal records management policies framework in place. The study has also established that ISO 15489 was the only adopted standard as a best practice in management of records in the government ministries. It is important that the ministries adopt minimum standards so that government systems are interoperable and share a common baseline for e-Records functionality (IRMT, 2004). In view of these findings, the study recommends that:

- SNA should facilitate the development of records management policies for the ministries which should include the management of electronic records as indicated in section 7.4.1.
- SNA should consider adopting other relevant international standards to enhance the management of electronic records within the ministries. This includes but is not limited to: Module 3, Guidelines and Functional Requirements for Records in Business Systems, ICA: Functional Specifications. Business Information Systems Software, National Archives of Australia; MoReq 2, Model Requirements Specification for the Management of Electronic Records; and the E-Records

Readiness Tool, and the International Records Management Trust. Such standards and functional requirements are essential to ensure that government ICT systems consistently create, capture, organise, store, search, retrieve and preserve e-Records and protect the integrity and trustworthiness of those e-Records (IRMT, 2004).

- The staff should be made aware of and educated about records management procedures, tools and records classification scheme to improve the level of adherence.
- Awareness and education should be complemented with regular compliance audit carried by SNA in order to detect areas that may need improvements within the ministries.
- SNA needs to facilitate the development of appraisal and disposal tool to ensure that appraisal and disposal of records within the ministries is done on a routine basis to avoid having to appraise and dispose of the records just for purposes of creating space within the registries.
- There is also a need to carry out a records management staff utilization study within the government ministries to check if records management staffing levels are adequate. The study should be carried out in conjunction with the Management Services Division to thoroughly gauge staff capacity so that a solution can be sought.
- There is need to create awareness among ministries and departments with statutory responsibility for records.

7.4.3 Recommendation on e-Records management products and technologies that exist in the government ministries in Swaziland

The study established that most of the technologies for electronic records creation were available in the ministries but none of the ministries had Decision Support System (DSS) and Online Transactional Processing System (OLTPS). Bantin (2002) has identified these systems as the most suitable systems for processing, reducing clerical costs, and updating documents. It is therefore recommended that:

- SNA, in collaboration with the Department of Computer Services and the Department of e-Government should develop specifications and functional requirements for e-Records management systems within the context of e-Government in Swaziland to ensure that all software acquired for managing e-Records capture the requirements of e-Government, including capability to interface with the e-Government platforms for push and pull of data.

- To bring uniformity and standardization for the systems acquired by the ministries for management of e-Records in support of e-Government the Moreq model can be used as a reference point for defining these specifications.
- SNA, the Department of Computer Services and the Department of e-Government should also consider the rollout of a standardized e-Records management system that has functionalities for interfacing with e-Government systems. Such a system would aim to bring the uniformity and standardization of electronic records systems and management practice across government ministries and departments.
- SNA must introduce a system that covers all records management functionalities through modules such as: records circulation, records appraisal, records disposal, records preservation, records retrieval, scanning and capturing of electronic documents that were created in paper-based format. The implementation of electronic records management system will also improve economy and efficiency of these ministries in the management of records by reducing cost overheads arising from space and storage equipment for unnecessary paper records. The Ministries have the advantage that they can implement the electronic records management system with ease since they already have several computers, printers, servers and other related IT requirements that can be utilized as a start. Through the department of computer services, the ministries need to purchase and add more of these products and technologies to ensure effective implementation of the EDRMS system without numerous barriers.
- The Department of Computer Services should champion, through a consultative process, a standard model to be adopted by all government ministries and departments for the implementation of management of e-Records in the context of e-Government environment.
- The Department of Computer Services should also increase internet connectivity and the bandwidth to ensure full and continuous internet access in the ministries.
- The Department of e-Government should fully implement the e-Government system because e-Records management cannot be planned and succeed outside e-Government.

7.4.4 Recommendation on resource capacity and training for records management staff

The findings of the study have revealed that there is no sound records management initiatives, the government ministries are facing an increase in paper proliferation in the offices and there are some challenges in retrieving records. It has also been established that there is inadequate trained registry staff with experience in terms of theory and practice of managing e- records. The study therefore recommends that:

- Records management procedures have to be developed to enable the smooth operation of the ministries registries which has been used as a dumping site for action officers. Since the working space is not adequate in some offices, records have to be kept in the ministries registries where they can be retrieved when required by everyone. These would also allow smooth of information sharing and there will be proper documentation of all files that exist in the registries. The retrieval of files in the registries would be much easier and duplication of records would be reduced.
- Action officers have to be encouraged to keep their current records in the registries for current records, storerooms for semi- current records and the records center for no-current records to be maintained by qualified records officers. Wema (2003) similarly stresses that officers should be discouraged from keeping current and non- current records together as this makes records storage difficult and may render the records irretrievable.
- The ministries should dedicate adequate budget to the records management unit to cater for capacity building for registry staff and registry equipment for the registries.
- There is a need for recruitment of more trained registry staff from institutions of higher learning such as the Institute of Development Management (IDM) that offer archives and records management as they will have a better appreciation and knowledge of records management issues. Ngulube (2004:7) states that "organizations should avoid the leapfrog approach with respect to training. Relevant training should be offered before employees are expected to use the system". Therefore the clerical officers and secretaries currently running the registries in the ministries could be trained at diploma or degree levels in archives and records management. Tsabedze (2011) emphasises the need for registry staff with records management skills as a prerequisite to effective management of records in government ministries in Swaziland. Swaziland government ministries should encourage registry staff to attend

records management conferences, seminars and workshops to ensure the professional development of the staff members. This would ensure that registry staff in the ministries is kept abreast of emerging issues in the archives and records management profession.

- SNA should create partnership programmes with other governments that have progressed well in management of electronic records and e-Government such as the governments of Malaysia, Australia, United States of America, Australia, China, Turkey and New Zealand. This would assist in learning and benchmarking to foster alignment of management of electronic records to international standards.
- Vigorous training should be provided to registry staff and ICT officers on management of e-Records in the context of e-Government environment. Such training could be developed through collaboration between SNA, the Department of Computer service, the Department of e-Government and the Institute of Development Management (IDM) which is the only training institution in the country that provides archives and records management, short and long term courses.

7.4.5 Recommendation on internal awareness of link of e-Record management with e-Government strategy

The study established that there is low awareness on records management programmes as the sensitization of staff on records management is not done regularly. The study therefore recommends that

- SNA should regularly conduct sensitization seminars and workshops for raising awareness in the ministries for the different categories ranging from senior management, middle management, lower management and the rest of the staff. The sensitization seminars and workshops should be in line with the records management procedure manual. Maseh (2015) recommended that staff should be made aware about the records management procedures and registry staff should also be trained on how to implement the records management manual. Chinyemba and Ngulube (2005) also recommended that there is a need to sensitize all staff about records management programmes using the manual as a reference point for practices and procedures.
- All new government officers should undergo records management orientation for them to understand their responsibilities and to generally appreciate the records management framework they operate within.

- SNA should consider appointing qualified and experienced registry staff to the records management unit so that they can conduct internal records awareness workshops to all action officers within the ministries. This must make the action officers familiar with and implement the principles of records management. The regular internal awareness within the ministries must be able to give action officers more confidence to manage both paper and e-Records throughout the life cycle. Action officers within the ministries must be competent and skilled for all records management operational and functional requirements.
- SNA in collaboration with the Department of e-Government needs to regularly sensitise or make aware the action officers and registry staff the relation between e-Record management and the e-Government strategy through training. They need to be made aware that e-Records management cannot be planned and succeed outside e-Government.
- In collaboration with the Department of e-Government, SNA needs also to regularly sensitise or bring awareness to the Ministers and Principal Secretaries on the relation between management of e-Records and the e-Government strategy through training. Ministers and Principal Secretaries provide the overall political and administrative leadership essential for successful introduction, development and implementation of government policies and programmes. There can be no success without a strong leadership at these levels to champion new initiatives

7.4.6 Recommendation on the depth of government wide digital preservation strategy

The findings of the study revealed that the government ministries did not have a digital preservation strategy that supports the preservation of records and other information materials to ensure their continued access. The study therefore recommends that:

- SNA should take a lead role in developing a comprehensive preservation strategy that harmonizes management of electronic records across government ministries.
- SNA could also benchmark with Korea and Singapore National Archives who have implemented unified digital preservation systems.
- The ministry of ICT should also fast track the amendment and passing into law of the proposed National Archives and Records Management Bill of 2010 that provides for management and preservation of electronic records.

7.5 Proposed framework for management of e-Records in the context of e-Government strategy

Though the 2013-2017 Swazi e-Government strategy emphasises that it is a vehicle for national economic and social development by ensuring effectiveness, efficiency, transparency and accountability on the part of the government, it does not highlight whether in government ministries in Swaziland e-Records are ready for the purposes of use in the implementation of e-Government. This makes it problematic to access e-Records in rural areas or any other place where there is no technology and electricity. Therefore the key output of the study is to develop a framework for management of e-Records in the context of e-Government strategy. The proposed framework is premised on the understanding that effective management of e-Records is a critical success factor for e-Government.

7.5.1 Justification of the framework

The proposed framework for the management of e-Records in the context of e-Government strategy in Swaziland provides a structure that can enhance a collaborative approach to management of e-Records between e-Government services owners and records management stakeholders in Swaziland to achieve the desired synergies between management of e-Records and e-Government strategy to ensure that existing practices for management of e-Records adequately support e-Government strategy. Figure 7.1 presents the proposed framework.

The rationale for the framework is based on the empirical results in chapter five and on the literature review which established that:

- The level of e-Records readiness in the government ministries is at infancy stage since records management is disjointed, haphazard, is poorly approached there is poor records management skills and professional training of staff, weak legislative and policy framework, and there is low capacity building on records management staff.
- There is no standardised records management system to manage e-Records in the context of e- Government strategy.
- There is no clear framework for examining and understanding e-Records readiness in the context of e-Government strategy.

It has been argued throughout the thesis that the implementation of e-Government has necessitated the emergence of e-Records. As has been observed throughout this study the

problems associated with e-Records management are inseparable from the problems of e-Government. The electronics, the provision of services to businesses and citizens will produce e-Records as evidence in individual transactions. The evidence must be kept in the form of records to demonstrate accountability and maintain reliable access. Replacing the manual and paper processes with electronic processes in government will generate e-Records as evidence in policy management and service delivery areas. These transactional records will be generated by new forms of service delivery when electronic transactions are received from businesses and citizens and processed in one or more departments. This implies that government ministries must restructure and establish standardized procedures for the management of e-Records. The need to have a clear framework for understanding the e-Records readiness in the context of e-Government strategy is critical. With e-Government being implemented in Swaziland, e-Records that document government transactions and online activities are also being produced. It is therefore important that government ministries ensure that standards are developed and implemented, that appropriate facilities are created and that adequate resources are invested in managing official records in digital and other formats. Once implemented by government ministries the proposed framework would help the ministries to comply with the facets of e- Records readiness and be in a strong position to drive the e-Government strategy in Swaziland.

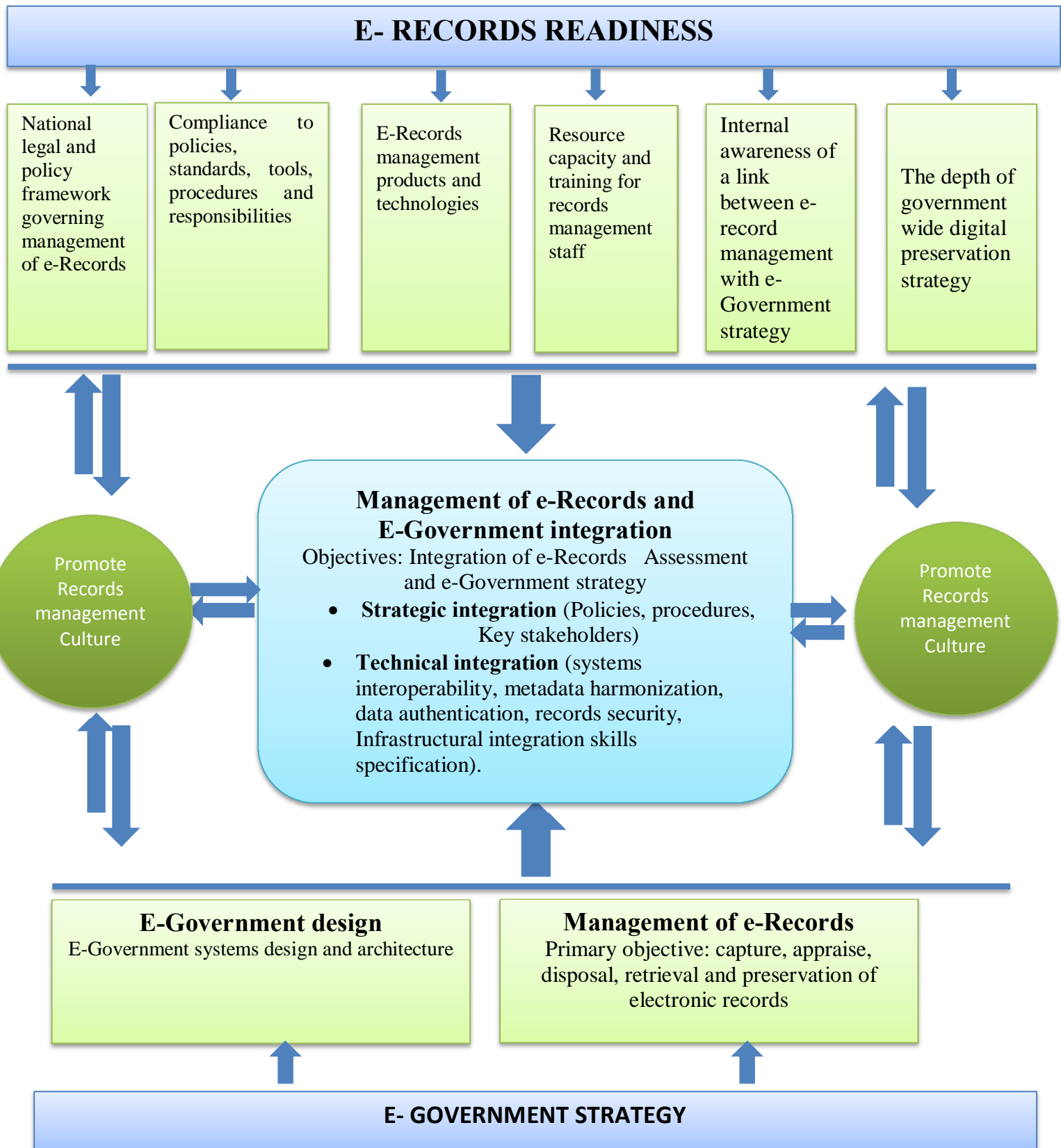


Figure 7.1 Proposed framework for management of e-Records in the context of e-Government strategy

7.5.2 Explanation of the framework

This section explains the components within the framework. The proposed framework explains what the Swaziland government ministries should do in order to strengthen the management of e- Records environment in the context of e-Government strategy in order to create, manage and preserve trustworthy and reliable records for accountability, transparency and good governance. The elements include:

- (a) E- Records Readiness
- (b) Management of e-Records
- (c) Management of e-Records and e-Government integration
- (d) E-Government design
- (e) E-Government Strategy

(a) E-Records readiness

E-records readiness implies having a proper e-Records management system that can support e-Government and improve service delivery by government ministries to the citizens.

This entails building on the following aspects:

Reviewing National legal and policy framework governing management of e-Records

The national legal and policy framework reflects how a country intends to manage its records. Legislation is the key factor and has a major role in governing records keeping in government entities and employees under these entities. The national legal and policy framework measures are components required to enforce record keeping in the face of problems of handling electronic records. Taking this assertion into consideration it is necessary for the government of Swaziland to review its national policies and legal framework governing the management of e-Records.

Reviewing records management standards, tools and procedures

Governments that are creating e-Records must adopt or develop a government standard setting functional requirements for the management of e-Records. These standards and functional requirements are essential to ensure that the government's ICT systems create, capture, organize, store, retrieve, and retain electronic records and protect the integrity and reliability of such records in a consistent manner. In Swaziland only ISO 15489: 2001 is adopted as a benchmark for developing the Records Management Procedure Manual

produced by Swaziland National Archives which is used by the different ministries and departments. There are many international standards that can be adopted by the government of Swaziland for usage in records management such as Module 3, Guidelines and Functional Requirements for Records in Business Systems, ICA: Functional Specifications. Business Information Systems Software, National Archives of Australia; MoReq 2, Model Requirements Specification for the Management of Electronic Records; ISO 15489: 2016: Information and Documentation ó Records Management; E-Records Readiness Tool, International Records Management Trust ; European Commission's Model Requirements for the Management of e-Records; US Department of Defence DOD 5015.2; United Kingdom National Archives functional requirements among others. It is therefore essential for the government of Swaziland to go further than ISO 15489: 2001 and embrace other relevant standards to manage e-Records.

Determining e-Records management products and technologies that exist

There have been many developments over the past decade with regards to technologies and products for managing e-Records and digital information. These include Records Management Application (RMA) software, Electronic Document and Records Management (EDRM) systems, Enterprise Content Management (ECM) systems or Information Lifecycle Management (ILM) systems .These technologies and product solutions are designed to enable institutions to capture, classify, store, retrieve and track electronic records, regardless of their format (paper, e-mail, web pages, digital documents, basic transactions, data, etc.).

Taking this assertion into consideration, it is necessary for the government of Swaziland to know what solutions are available for integrating e-Records management into e- Government system before attempting to adopt inappropriate technologies for this purpose or to create new solutions from scratch.

Examining resource capacity and training for e-Records management staff

Although the Ministries and Departments may have established records management policies, tools and procedures, they will be ineffective unless they are supported by qualified records management staff with adequate and regular financial support to implement and maintain them. Ministries and departments should conduct needs assessment and train registry staff on modern techniques of managing e-Records.

Creating internal awareness of the link of e-Record management with e-Government strategy

Senior management and action officers need to be aware of the importance of trustworthy and well managed records for delivering effective records and information services and protecting institutional accountability and integrity. This together with records and information management policies, procedures, tools and resources would result in sound records management.

Establishing the depth of government wide digital preservation strategy

Electronic records created as a result of e-Government activities must remain accessible and usable as long as they are necessary for business or legal purposes or, in some cases, for historical purposes. To ensure the long-term preservation of e-Records and to protect the country's digital memory, governments need to implement digital preservation strategies that anticipate ICT obsolescence and incompatibility. This will involve adequate planning for the migration of digital information across technologies and formats, and the implementation of controls, procedures and responsibilities to monitor accessibility, usability and authenticity of electronic records.

(b) Management of e-Records

The management of e-Records element defines the requirements for an effective management of e-Records which guarantees an e-Records management with the e-Government environment.

- Primary objective: capture, appraise, dispose, retrieve and preserve electronic records

(c) Management of e-Records and e-Government integration

The point of integration is the point at which the unique requirements set out in the e-Government and management of e-Records components are merged to establish a harmonized approach to the delivery of e-Government services. Duplicate requirements are merged. Additional requirements for alignment are identified together with areas of efficiency and economy. Unique requirements are determined and their relationship to the rest established.

- Defining the integration unique requirements for management of e-Records components and e- Government are merged to build a synchronised approached to e-Government.

(d) E-Government design

The e óGovernment systems design and architecture refers to the development, setting up and configuring of e-Government platforms. This element provides technical specifications and requirements for e-Government platforms.

(e) E- Government strategy

E- Government Strategy refers to developing a strategy for the design and delivery of e-Government.

- Define services delivery specifications within e-Government
- Define the requirements of effective management of e-Records that would ensure adequate management of e-Records in the context of e-Government strategy.

7.5.2.1 Strengthening national legal and policy framework

The study findings have revealed that the management of e- Records falls below expected standards as evidenced by the weak legislative and policy framework.

7.5.2.1.2 Records management legislation

There is an urgent need to fast track the amendment and passing into law of the proposed National Archives and Records Management Bill of 2010, which captures the total Life Cycle management of all records regardless of media and format.

7.5.2.1.3 Records management policies

Once the amendment and passing into law of the proposed National Archives and Records Management Bill of 2010 have been considered, policies should be developed to ensure that mechanisms are put in place to resolve shortcomings (World Bank, 2000).

The study confirmed that the records managing policy was existent but it does not fully address the management of e-Records. The study recommends that SNA should facilitate the development of records management policies for the ministries which should cover the management of electronic records in e-Government, requirements for systems for managing

electronic records, preservation of electronic records, common data to be shared across the ministries, ICT infrastructure requirements for managing electronic records and email management.

7.5.2.2 Reviewing records management standards, tools and procedures

The findings of the study revealed that ISO 15489: 2001 has been used as a benchmark for developing the Records Management Procedure Manual produced by Swaziland National Archives. Therefore SNA should consider adopting other relevant international standards to enhance the management of electronic records within the ministries. This includes but is not limited to: Module 3, Guidelines and Functional Requirements for Records in Business Systems, ICA: Functional Specifications Business Information Systems Software, National Archives of Australia; MoReq 2, Model Requirements Specification for the Management of Electronic Records; and the e-Records Readiness Tool, International Records Management Trust. Such standards and functional requirements are essential to ensure that government ICT systems consistently create, capture, organise, store, search, retrieve and preserve e-Records and to protect the integrity and trustworthiness of those e-Records (IRMT, 2004).

7.5.2.3 Determine e-Records management products and technologies that exist

The study established that most of the technologies for electronic records creation were available in the ministries but none of the ministries had Decision Support System (DSS) and Online Transactional Processing System (OLTPS). Bantin (2002) has identified these systems as the most suitable systems for processing, reducing clerical costs, and updating documents. The study recommends that SNA in collaboration with the Department of Computer Services and the Department of E- government should develop specification and functional requirements for e-Records management systems within the context of e-Government in Swaziland to ensure that all software acquired for managing e-Records capture the requirements of e-Government, including the capability to interface with the e-Government platforms for the push and pull of data. SNA must introduce a system that covers all records management functionalities such as records circulation, records appraisal module, records disposal module, records preservation module, records retrieval module, scanning and capturing of electronic documents that were created on paper-based format. The implementation of electronic records management system will also improve economy and efficiency of these ministries in management of records by reducing cost overheads

arising from space and storage equipment for unnecessary paper records. The ministries have the advantage that they can implement the electronic records management system with ease since they already have several computers, printers, servers and other related IT requirements that can be utilized as a start. Through the department of computer services, the ministries need to purchase and add more of these products and technologies to ensure a successful and effective implementation of the EDRMS system.

7.5.2.4 Resource capacity and training for e-Records management staff

The study established that there are inadequate resources to manage e-Records effectively within the ministries. Evidence of this is the inadequate budget allocated specifically for records management unit. As part of records management programme, there is need to have an adequate budget dedicated to the records management unit to cater for the registry staff and registry equipment. It has also been established that there is inadequate trained registry staff with experience in terms of theory and practice of managing e-Records. Therefore it is recommended that more trained registry staff be recruited from institutions of higher learning such as the Institute of Development Management (IDM) that offer archives and records management as they will have a better appreciation and knowledge of records management issues. Swaziland government ministries should encourage registry staff to attend records management conferences, seminars and workshops to ensure their professional development. This would ensure that registry staff in the ministries is kept abreast with emerging issues in the archives and records management profession.

7.5.2.5 Create internal awareness of link of e-Record management with e-Government

The study established that there is low awareness of records management programmes as the sensitization of staff on records management is not done regularly. All new government officers should undergo records management orientation for them to understand their responsibilities and to generally appreciate the records management framework they operate within. The proposed records management policy could have a clause on this. One of the responsibilities of the registry staff in the ministries and SNA will be to provide on-going training for all action officers on records keeping. The ministries should dedicate adequate budget to the records management unit to cater for capacity building. Continuous monitoring

and evaluation of records management programme will ensure that problems are quickly identified and rectified, avoiding a collapse of the records management programme.

7.5.2.6 Reviewing of e-Government Strategy

The current study has established that e-Government strategy in Swaziland does not have an element of e-Records management and readiness.

The next element is to review the e-Government strategy so as to define the following:

- The purpose of e-Government: for increasing efficiency, transparency and citizen participation.
- The scope of e-Government across the government ministries and the extent to which e-Government would transcend government services: in terms of government to Citizens (G2 C); Citizens to Government (C2G); Government to Government (G2G); Government to Business (G2B)
- Services to be delivered on e-Government: These services include public utility services i.e. Telecommunication, Transportation, Post, Medical facilities, Electricity, Education and also some of the democratic services relating to citizenry such as Certification, Registration, Licensing, Taxation, Passports, ID Cards etc.
- Policies, procedures, standards and legal framework anchors of e-Government: reviewing the National ICT Policy Framework and records management legal framework.
- Framework for e-Government delivery: supporting policies and ICT infrastructure
- Success measures for government, business and citizens: effective service delivery and participation of Swazi citizens on governance issues
- The growth plan for the e-Government penetration in government; outreach programmes to the stakeholders communities and dissemination and implementation plan
- Infrastructure and key players in e-Government supporting policies, ICT infrastructure and government, citizens and corporate world
- Standardization of e-Government services across the ministries and department in Swaziland: outline manuals, procedures and standard documents.
- The significance of management of e-Records in the context of e-Government: outline how e-Records are going to be managed in the government ministries.

The reviewed e-Government strategy would harmonise e-Records management and e-Government in Swaziland government ministries. The e-Government strategy can only be implemented successfully if it is driven by robust e-Records management framework.

7.5.2.7 E-Government system design

The main assumption of the current study was that Swaziland government ministries have already rolled out an e-Government, which then tends to be an increase of electronic records creation within the ministries and departments. Therefore the study also investigated the status of e-Government in the ministries. The study established that the ministries were at the initial phase as regards e-Government implementation. The current study also established that Swaziland government ministries were just starting to be prepared for the implementation of e-Government services by way of putting in place the necessary infrastructure and operating administrative functions of the ministries electronically.

The e-Government systems design is the development, implementation and configuration of the e-Government platforms. This element provides technical specifications and requirements for the e-Government platforms. It will also look at e-Government models, e-Government readiness, ICT infrastructure for e-Government. It is at this stage that the e-Government requirements on electronic records will be determined to scope what e-Data and records will be required to support the service including the desired formats of the records.

7.5.2.8 Management of electronic records component

The findings also revealed that these records exist in various forms including but not limited to digitized records, structured data in business applications databases, email records and other born digital records arising from various desktop applications. The study further revealed that there were initiatives to improve policy framework for management of electronic records as well as acquisition of software to aid the management of electronic records.

This element outlines the requirements for management of e-Records that would ensure adequate management of e-Records within the context of e-Government. When developing the management of e-Records component, the following requirements should be considered:

- Capture of various formats of records
- Manage Classification Module

- Central Registry Module
- Loan Module
- Security and integrity of e-Records
- Appraisal and disposition of e-Records
- audit trails on access and changes to e-Records
- Metadata of records
- Preservation of the e-Records
- Digital archiving
- Double filling detection to avoid duplication

The development of the Management of e-Records component will be the responsibility of the Swaziland National Archives (SNA).

7.5.2.9 Management of e-Records and e-Government integration

The study has revealed that there is no strategic integration between management of e-Records and e-Government in the government ministries. The study further established that there is weak interoperability between e-Government and e-Records systems. This is a major challenge that significantly impacts on the technical orientation of both e-Government and e-Records systems.

The integration point is the point at which the unique requirements defined at management of e-Records and e-Government components are merged to build a harmonized approach to e-Government. Duplicate requirements are merged. Complementary requirements are identified for alignment. Supplemental requirements are identified to define areas of efficiency and economy. Unique requirements are determined and their relationship with the rest established. The integration should be on two fronts: strategic and technical integration.

Strategic integration

Integration refers to the blending of management of e-Records objectives and e-Government objectives as contemplated in the management of e-Records and e-Government components, scoping to provide guiding principles that inform the direction of e-Government implementation. The objective of this element is to anchor management of e-Records into e-Government and e-Government into management of e-Records and provide a strategic

method of management of e-Records into the e-Government environment. Key outputs of the integration will be:

- A coordinated strategy that captures the requirements for both Management of e-Records and e-Government that define the relationship between the two.
- Policy directions for aligning Management of e-Records and e-Government.
- Clear definition of Management of e-Records and e-Government key stakeholders and their roles and responsibilities in driving effective e-Government.
- Standards, models and best practice indicators for managing electronic records in the context of e-Government.
- Framework for the relationship between management of e- records and e-Government stakeholders.
- Specification of ownership of the management of e-Records functions within the e-Government in line with the e-Government strategy objectives.
- Benchmarks for e-Records services that would help enhance the quality of the managing of e- Records.

Strategic integration should be a shared responsibility between the Department of e-Government, the Department of Computer Service and SNA.

Technical integration

At this stage the management of e-Records system and e-Government are linked together to ensure seamless management of e-Records in the context of e-Government strategy. This can be accomplished through the following:

- **Systems interoperability.** This would involve interfacing of the e-Government application service with the database for the EDRMS. This is to achieve data exchange that is scoped in the data sharing.
- **Metadata harmonization** which refers to terminology for describing records within the e-Government, e-Records and business systems standardization. Data interchanged between e-Records system and e-Government, is exchanged based on linked database fields. The fields are defined to accept data of certain formats and field lengths. Therefore harmonization of metadata becomes important to achieve the seamless interchange of data.
- **Data authentication.** Mechanisms for authenticating data and electronic records must be put in place to eliminate consumption of services based on forged or fraudulent records. The objective of this stage is to ensure that accurate data is captured and used

to dispense government services. This element will be important in enhancing transparency and accountability.

- **Records security and integrity.** The security and integrity of records overtime must be established across e-Government and management of e-Records systems to ensure the records remain valid and reliable.
- **Electronic records preservation.** Preservation of records generated on the e-Government is done at the management of e-Records back end side. This will ensure that there is no deleting of records from e-Government databases or other business application systems to create room for newer records. Email archiving systems can be interfaced with management of e-Records to enhance preservation of emails.
- **Infrastructural integration.** This refers to harmonization of ICT infrastructure across e-Government and management of e-Records systems to ensure both are operating at the same level to achieve operational resilience and economy in management of e-Records and e-Government. This integration would include both hardware and software harmonization.
- **Skills specification.** This refers to defining the minimum skills sets and competencies for managing electronic records. These are skills base for both ICT and records management officers. The objective of this aspect is to anchor required expertise for management of e-Records in e-Government setup-both professional and technical- on ICT and electronic records.

7.5.2.10 Responsibilities for implementation

The study has revealed that the key stakeholders in the implementation of e-Government system and EDRMS system are working in silos. It is recommended that the implementation of this framework in the government ministries in Swaziland be a joint responsibility between SNA, the Department of e-Government and the Department of Computer Services.

7.6 Implications of the study for theory, policy and practice

The importance of the study is assessed to the extent that it enriches academic research and field literature (theory), how it improves practice and its impact on policy (Mitchell, 2012; Davis, 2005 and Creswell, 2003). With regard to the present study's implication to theory, the study aimed to assess e-Records readiness in the government ministries in Swaziland with a

view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government.

Thus, emanating from fulfilling the aim of the current study which entailed adapting the applicability of the e-Records Readiness Tool, the study has established that the tool can be adopted by any organization which wants to assess e-Records readiness. Therefore an organization needs to pick what applies to it. This can be applied without affecting the efficiency of the tool. As Nengomasha (2009:256) points out, "applying the tool needs a clear understanding of various issues surrounding records management in particular organizations and at national level as well".

Empirical findings have been provided to demonstrate the role of management of e-Records in the context of the e-Government strategy. These findings together with other expositions from literature contribute to the ongoing scholarly discourse on the role of management of e-Records in the context of e-Government strategy.

The proposed framework in section 7.5 has provided a basis for further scholarly engagement on effective frameworks for management of e-Records in the context of e-Government strategy. The present study broke new ground in investigating the management of e-Records in Swaziland by focusing on developing a framework for management of e-Records in the context of e-Government strategy in Swaziland. Previous related studies have tended to focus on paper-based records management in government ministries in Swaziland, for example, Tsabedze (2011).

Successful implementation of e-Government is dependent on e-Records readiness. The study established that Swaziland is not yet e-Records ready. The country's 2013-2017 e-Government strategy and the ICT policy lack depth on e-Records management and readiness. Government ministries in Swaziland still rely on the obsolete and out of current context Records and Archives ACT of 1971. This study thus contributes towards bridging this gap, through the framework on how e-Records management could be harmonized with e-Government in Swaziland government ministries.

The study's implication to practice stems primarily from the proposed framework in section 7.5 which can be harnessed by records management practitioners to enhance the management of e-Records in the context of the e-Government strategy. As An (2009) notes, integrating e-Records into the national information strategy is an effective e-Government strategy. The framework suggests a structure that can be used to achieve this integration.

Lastly with regard to the study's contribution to policy, by establishing the link between management of e-Records and e-Government strategy in Swaziland and through the recommended framework, the study has shed light on approaches for integrating the management of e-Records within the policy direction for e-Government strategy as indicated in the proposed framework, with elements such as e-Records Readiness, Management of e-Records, Management of e-Records and e-Government integration, e-Government design and e-Government Strategy. It also provided a baseline for the development of guidelines for management of e-Records within e-Government strategy in Swaziland.

There is a disjointed, haphazard and poor approach to the management of Government e-Records, poor Records Management skills and professional training of staff, weak legislative and policy framework, slow progress in the implementation of Electronic document records management system EDRMS and low capacity building as records management staff is rarely taken for training. The study has also revealed that opportunities for increasing the depth of e-Records readiness exist such as: availability of financial resources for EDRMS project.

Therefore the study advocates among other things, improvement of legislative and policy framework; regular training for records management staff; soliciting senior government officials' support and coming up with sufficient budget to cater for records management units.

7.7 Suggestion for further research

As has been ascertained in the current study, there is lack of empirical studies on e-records readiness in government ministries in Swaziland. Most of the studies that have been documented on records management systems in Swaziland have largely focused on paper-based records management in government ministries. The current study therefore breaks new ground and brings out three issues that warrant further research as presented in the discussion that follows.

Firstly the study revealed that there is a lack of empirical studies on e-Records readiness in Swaziland. Most of the studies that have been documented on records management systems in Swaziland have largely focused on paper-based records management in government

ministries. Therefore there is a need to also investigate e-Records management in parastatal organizations in Swaziland to establish their status of e-Records readiness and e-Records management practices. This will ensure that management of e-Records both in government and in the public sector is harmonized to enhance service delivery, accountability and transparency in the management of the country's public affairs.

Secondly the study revealed that government ministries in Swaziland do not have a digital preservation strategy. The study therefore recommends that there is need to also investigate preservation of e-Records in the government ministries in order to ensure that there is e-Records preservation framework that caters for the high influx of e-Records that are created by government ministries and departments.

Thirdly, the current study revealed that lack of e-Records management systems was a major challenge to the capture and management of e-Records in the government ministries in Swaziland. The current study has revealed that there is a pilot project for EDRMS in the Ministry of ICT and Cabinet office, but that there are limitations in the use of the system in place. Therefore a further study is recommended on e-Records management systems which would define ideal functional requirements for suitable e-Records management software in the context of e-Government requirements in the government ministries in Swaziland. Lastly, the current study has revealed that most of the action officers receive and send official email frequently. Therefore a further study is recommended on strategies of e-mail management in government ministries in Swaziland.

7.8 Final conclusion

This study investigated e-Records readiness in the context of e-Government strategy in Swaziland, with the view to proposing an effective framework for the management of e-Records as a facilitative tool for e-Government. E-Records readiness was examined based on a mixture of components namely the national legal and policy framework governing management of electronic records; the level of compliance to policies, standards, tools, procedures and responsibilities for e-Records management; the e-Records management products and technologies; resource capacity and training for e-Records management; internal awareness of link of e-records management with e-Government strategy and lastly the depth of government wide digital preservation strategy .

The current study established that the level of e-Records readiness in the government ministries is at infant stage. These include: the disjointed, haphazard and poor approach to the management of government e-Records, poor records management skills and professional training of staff, weak legislative and policy framework, slow progress in the implementation of EDRMS and low capacity building as records management staff is rarely taken for training. To foster effective e-Records readiness in government ministries, numerous recommendations were made in view of the study's findings such as improvement of legislative and policy framework; and regular training for records management staff. In addition the study also proposed an effective framework for the management of e-Records as a facilitative tool for e-Government.

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APPENDIX B: INTERVIEW GUIDE - DIRECTOR OF SWAZILAND NATIONAL ARCHIVES

Dear Respondent,

I am a PhD student (student No. 200812867) at the University of Zululand, in the Department of Information Studies. I am carrying out a research as part of the requirements for the award of a doctorate degree (Information Studies). The title of my research topic is *“The assessment of E-records readiness in context of E-government strategy in Swaziland”*.

The aim of the study is to assess e-Records readiness in the Swaziland government ministries. The goal of the study is to conceptualise a framework for the effective management of e-Records as a facilitating tool for e-Government. The study will gather data on national legal and policy framework governing management of electronic records; compliance to policies, standards, tools, tools, procedures and responsibilities for e-Records management; e-Records management products and technologies; resource capacity and training for e-Records management staff; level of awareness of link of e-Record management with e-Government strategy and the depth of government wide digital preservation strategy.

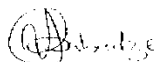
I wish to kindly request you to set aside some time for an interview which will enable me obtain data that will address the research questions. The information you will provide will be kept in confidence and used only for the current study.

Should you have questions about the research please contact me on 76427960

(vtsabedze@idmbis.ac.sz) or my supervisor on Dr. Trywell Kalusopa T: +27 (0) 35 902 6878 C: +27 (0) 60 656 75 93 email: KalusopaT@unizulu.ac.za

Thanking you in advance for your time and cooperation.

Yours Faithfully



Vusi W. Tsabedze (PhD Candidate)

SECTION 3: COMPLIANCE TO POLICIES, STANDARDS, TOOLS, PROCEDURES AND RESPONSIBILITIES FOR RECORDS MANAGEMENT

14. Are the ministries complying with national policies and procedures on records management?

Yes []

No []

If ÷Yes or Noö, please explain further

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í í

15. Are the ministries complying with international standards on records management?

Yes []

No []

If ÷Yes or Noö, please explain further

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í í

16. Do ministries have a centralized functional classification scheme for all records?

Yes []

No []

If ÷Yesö How is the adherence to the functional classification scheme by the ministries?

í
í í

17. Do ministries have records management procedures to guide staff on both paper and electronic records?

Yes []

No []

If ÷Yesö How is the adherence to the procedures on both manual and e-Records by the ministries?

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18. Do ministries have a records retention schedule of all records?

Yes []

No []

If ÷Yesö above, what is the level of implementation of the records retention schedule?

High [] Above average [] Average [] Below average [] Low []

19. What measures are in place to ensure security and confidentiality of both manual and electronic records?

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20. Are the ministries records (both manual and electronic) stored in a central repository?

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21. Is there government support on Records Management in the ministries i.e. financial support, implementation support, adherence to records management standards?

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SECTION 4: E-RECORDS MANAGEMENT PRODUCTS AND TECHNOLOGIES

22. What electronic records management solution is being piloted at ministries?

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23. Are e-Records, e-content products and technologies included in the e-Government strategy?

Yes [] No []

24. What is the level of incorporation of e-Records requirements in the EDRMS systems functional requirements?

High [] Above average [] Average [] Below average [] Low []

25. What is the level of participation of records management staff in the planning and piloting of EDRMS?

High [] Above average [] Average [] Below average [] Low []

26. What is the collaboration between Department of National Archives, Department of e-government and Department of Computer Services in the management of e-Records?

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27. Are there any financial resources put aside by SNA for piloting EDRMS project?

34. What records management training programmes exist in the country?

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National Archives’ own programmes

Training on e-Records

Public training institutions and other private companies’ programmes

Suitability and adequacy of these training programmes

What the National Archives would like to see in place]

SECTION 6: INTERNAL AWARENESS OF LINK OF E-RECORD MANAGEMENT WITH E-GOVERNMENT STRATEGY

35. Which department is in control of the main electronic information systems running in government ministries?

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36. What is the relationship between the National Archives and this body?

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37. Are there any ERMS running in the ministries or in the process of being acquired?

Yes [] No []

If yes what is the specification?

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38. Were you consulted during acquisition of ERMS?

Yes [] No []

39. Where there are no ERMSs, what systems exist for the management of electronic records generated in the electronic information systems?

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40. Have you undertaken a survey to determine the amount of electronic records created in the government ministries?

Yes [] No []

41. Do you provide advice to registry staff and action officers within the ministries on how to manage records in electronic formats?

Yes []

No []

42. Do you have an electronic records management programme for government ministries?

Yes []

No []

If no, go to question 46

43. If yes, which of the following areas does it cover?

(a) Management of electronic records during their entire life cycle []

(b) Design and maintenance of electronic records systems []

(c) Transfer of electronic records deemed of archival value []

(d) Identification of records with archival value which should remain with creating agencies []

(e) Transfer of records management skills to registry staff []

(f) Other, please specify

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44. Do you collaborate with other government IT professionals or agencies to develop programmes for managing electronic records in the government ministries?

Yes []

No []

If no, go to question 48

If yes, please indicate the names of the agencies/ IT professionals involved and their roles.

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45. Which of the following areas does the collaboration with other government IT agencies cover?

(a) Developing records management application software []

(b) Running records management training programmes []

(c) Planning and design of electronic systems []

(d) Developing electronic records management standards []

(e) Developing policy for managing electronic records []

(f) Other, please specify

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46. Do you face particular challenges in providing advice relating to management of electronic records in government ministries?

Yes [] No []

If no, go to question 50

47. If yes, which of the following indicates the challenges you face?

- (a) Not capturing electronic records when created yes [] no [] uncertain []
- (b) Lack of adequate IT training yes [] no [] uncertain []
- (c) Lack of adequate financial resources yes [] no [] uncertain []
- (d) Lack of adequate staff yes [] no [] uncertain []
- (e) Inadequacy of existing records and archives legislation yes [] no [] uncertain []
- (f) Business administrators not including recordkeeping requirements when developing and updating software yes [] no [] uncertain []
- (g) Defining the role of system administrators and records managers yes [] no [] uncertain []
- (h) Other, please specify

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48. Does staff within the ministries know which department or staff to consult to clarify questions of records management policy and procedures?

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SECTION 7: DIGITAL PRESERVATION STRATEGY

49. What strategies have been put in place for the preservation of e- records?

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50. How do you ensure security of electronic records?

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51. Are the servers located in the ministries or offsite?

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52. Is there daily back up of all electronic records in the ministries.

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53. Do you have public folders (shared drives)? How are they managed?

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54. Are officers allowed to store records in desktops and laptops?

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55. How are official emails captured and managed within the Records management framework

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Recommendations and Additional Information Last Question:

56. Are there any comments you would like to make regarding e-Records management in the ministries and what can be done to improve the situation?

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This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

Thank you for your time and contribution to this research.

APPENDIX C: INTERVIEW GUIDE -DIRECTOR OF E- GOVERNMENT

Dear respondent,

I am a student at the University of Zululand, in the Department of Information Studies. I am carrying out a research as part of the requirements for the award of a doctorate degree (Information Studies). My research is an *assessment of E-records readiness in context of e-Government strategy in Swaziland*.

You are kindly been requested to participate in the study because of your responsibility for designing and implementing of E- government strategy and rolling out the network infrastructure that connect all government ministries in Swaziland.

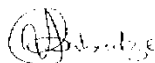
The aim of the study is to assess e-Records readiness in the Swaziland government ministries. The goal of the study is to conceptualise a framework for the effective management of e-Records as a facilitating tool for e-Government. The study will gather data on national legal and policy framework governing management of electronic records; compliance to e-Records management systems; determine the existing e-Records management products and technologies; resource capacity and training for records management staff; level of awareness of link of e-Record management with e-Government strategy and the depth of government wide digital preservation strategies.

I wish to kindly request you to set aside some time (15- 20 minutes) for an interview which will enable me obtain data that will address the research questions. Your response will be treated with strict confidentiality and used only for the current study.

Should you have questions about the research please contact me on 76427960 (vtsabedze@idmbls.ac.sz) or my supervisor Dr. Trywell Kalusopa T: +27 (0) 35 902 6878 C: +27 (0) 60 656 75 93 email: KalusopaT@unizulu.ac.za

Thanking you in advance for your time and cooperation.

Yours Faithfully



Vusi W. Tsabedze (PhD Candidate)

Date of Interview	
Ministry	
Designation	
Number of years in the current position	

1. How is the progress with the implementation of E ó government strategy so far? Is it going according to schedule or not?

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2. How is the adherence to the strategy by the ministries?

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3. Does the strategy cover the management of records?

Yes []

No []

Please explain further

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(Request a copy)

4. Does the Strategy stipulate clear roles and responsibilities for all internal stakeholders within the ministries i.e. management, supervisors, Records Management staff, IT staff etc

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5. Do you provide advice to registry staff on issues of E-government strategy implementation?

Yes []

No []

If no, go to question 7

6. If yes, what advice do you provide to registry staff?

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7. Is there government support on Records Management i.e. financial support, implementation support, adherence to records management standards?

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8. Are all electronic records receive and maintained at the ministries captured and maintained as manual records?

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9. Are the financial resources for records management activities adequate? If not, how does it affect delivery of your services?

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10. What are the electronic systems currently running in the Ministries?

[These could include e-mail systems, web-technology systems, database management systems, individual software for creation of official records, and smart systems.

Establish if the ministry has an ERMS]

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11. How is the progress of the EDRMS Project so far? Is it going according to schedule or not?

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12. Who is responsible for overseeing the design and implementation of electronic information management systems (e.g. project board, IT committee, etc)?

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13. What other strategies are used to ensure readability and accessibility of electronic information overtime?

20. How does the system control and limit the duplication of records?

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21. How is the transmission of data made secure?

[Establish if the system is linked with any other systems, accessible to users in different locations e.g. WAN, Web-access, types of users including members of the public]

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Recommendations and Additional Information

22. **Last Question:** Are there any comments you would like to make regarding e-Records management in the ministries and what can be done to improve the situation?

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This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

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Thank you for your time and contribution to this research.

APPENDIX D: INTERVIEW GUIDE -DIRECTOR OF COMPUTER SERVICES

Dear respondent,

I am a student at the University of Zululand, in the Department of Information Studies. I am carrying out a research as part of the requirements for the award of a doctorate degree (Information Studies). My research is an *assessment of E-records readiness in context of E-government strategy in Swaziland*.

You are kindly been requested to participate in the study because of your responsibility for designing and implementing of ICT policies, procedures, guidelines and gives professional guidance to the Government Ministries on issues of ICT infrastructure.

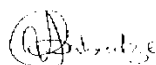
The aim of the study is to assess e-Records readiness in the Swaziland government ministries. The goal of the study is to conceptualise a framework for the effective management of e-Records as a facilitating tool for e-Government. The study will gather data on national legal and policy framework governing management of electronic records; compliance to e-Records management systems; determine the existing e-Records management products and technologies; resource capacity and training for records management staff; level of awareness of link of e-Record management with e-Government strategy and the depth of government wide digital preservation strategies.

I wish to kindly request you to set aside some time (15- 20 minutes) for an interview which will enable me obtain data that will address the research questions. Your response will be treated with strict confidentiality and used only for the current study.

Should you have questions about the research please contact me on 76427960 (vtsabedze@idmbis.ac.sz) or my supervisor on Dr. Trywell Kalusopa T: +27 (0) 35 902 6878 C: +27 (0) 60 656 75 93 email: KalusopaT@unizulu.ac.za

Thanking you in advance for your time and cooperation.

Yours Faithfully



Vusi W. Tsabedze (PhD Candidate)

APPENDIX E: QUESTIONNAIRE FOR REGISTRY STAFF

Dear Respondent,

I am a student at the University of Zululand, in the Department of Information Studies. I am carrying out a research as part of the requirements for the award of a doctorate degree (Information Studies). My research is an *assessment of E-records readiness in context of e-Government strategy in Swaziland*.

You are kindly been requested to participate in the study because of your responsibility for records management in the ministry.

The aim of the study is to assess e-Records readiness in the Swaziland government ministries. The goal of the study is to conceptualise a framework for the effective management of e-Records as a facilitating tool for e-Government. The study will gather data on national legal and policy framework governing management of electronic records; compliance to e-Records management systems; determine the existing e-Records management products and technologies; resource capacity and training for records management staff; level of awareness of link of e-Record management with e-Government strategy and the depth of government wide digital preservation strategies.

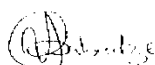
I wish to kindly request you to set aside some time (15- 20 minutes) and fill the questionnaire which will enable me obtain data that will address the research questions. Your response will be treated with strict confidentiality and used only for the current study.

Should you have questions about the research please contact me on 76427960

(vtsabedze@idmbls.ac.sz) or my supervisor on Dr. Trywell Kalusopa T: +27 (0) 35 902 6878 C: +27 (0) 60 656 75 93 email: KalusopaT@unizulu.ac.za

Thanking you in advance for your time and cooperation.

Yours Faithfully



Vusi W. Tsabedze (PhD Candidate)

SECTION 1: RESPONDENT DEMOGRAPHIC INFORMATION

Ministry	
Designation	
Educational Qualification	
Number of years in the current position	

SECTION 2: LEGAL AND POLICY FRAMEWORK

1. What national legal and policy framework governs management of records in government ministries?

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2. Does the National Archives Act in its current form, cover the management of both paper and non- paper based records?

Yes [] No []

If ðNoö, please explain further

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3. Has the National Archives Act been revised since its enactment?

Yes [] No []

If No, go to question 6

If yes, when was the Act revised?

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4. What new clauses were introduced in the Act?

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5. Does your Ministry have a policy on Records Management?

Yes [] No []

6. What is the general level of adherence to the Records Management Policy?

High [] Above average [] Average [] Below [] average Low []

7. Does the Policy cover the management of both paper and non- paper based records?

Yes [] No []

If ðNoö, please explain further

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8. Does the policy stipulate clear roles and responsibilities for all internal stakeholders within the ministries i.e. management, supervisors, Records Management staff etc

Yes

No

SECTION 2: COMPLIANCE TO POLICIES, STANDARDS, TOOLS, PROCEDURES AND RESPONSIBILITIES FOR RECORDS MANAGEMENT

8. What is the general level of compliance to policies on Records Management?

High Above average Average Below average Low

9. What is the general level of compliance to international standards on Records Management?

High Above average Average Below average Low

10. Does your ministry have a centralized functional classification scheme for all records?

Yes

No

11. If yes above, what is the general level of compliance to the functional classification scheme?

High Above average Average Below average Low

12. Does your ministry have records management procedures to guide staff on both paper and electronic records?

Yes

No

If yes above, what is the level of compliance to procedures on both manual and e-Records?

High Above average Average Below average Low

13. Does your ministry have a records retention schedule of all records?

Yes

No

14. If Yes above, what is the level of implementation of the records retention schedule?

High Above average Average Below average Low

15. How do you organize the records, which you receive and/or create including e-mail and other computer records, so that you can find and retrieve them easily?

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16. Does your office have guidelines on how to organize e-Records into directory and other structures?

Yes

No

17. To what level can your ministry demonstrate that records and information created, captured and preserved as part of standard business processes are secure, authentic, complete, accessible and useable?

High [] Above average [] Average [] Below average [] Low []

18. What measures are in place to ensure security and confidentiality of both manual and electronic records?

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19. Are your records stored in a central repository (both manual and electronic)?

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SECTION 3: E-RECORDS MANAGEMENT PRODUCTS AND TECHNOLOGIES

20. What electronic records management solution is being piloted in your ministry?

í í

21. Which equipment is available in your registry that is used in the creation of e-Records.

Please tick

Equipment	
Computer	
Printer	
Scanner	
Access to Internet	
Other specify í	

í
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22. Which of the following do you use to manage and store your electronic records?

Please tick

SECTION 4: RESOURCE CAPACITY AND TRAINING FOR RECORDS

MANAGEMENT STAFF

28. Is there any designated records management unit (RMU) within ministry?

Yes [] No []

29. If yes above, is the space for the RMU adequate?

Yes [] No []

30. Does records management function have a dedicated annual budget for its activities?

Yes [] No []

31. Is the number of records management staff adequate?

Strongly Agree [] Agree [] Neither Agree or disagree [] Disagree [] strongly Disagree []

32. Have you received education and training in records management?

Yes [] No []

If no go to question 37

33. (If yes) which of the following choices indicates your highest level of professional education and training in records management? (Please tick all the applicable options)

(a) Degree []

(b) Diploma []

(c) Certificate []

(d) Other, please specify

í í

34. Does your ministry run courses to update your knowledge and skills in records management?

Yes [] No []

If no go to question 41

35. If yes, have you attended any records management course run by your ministry in the last five years?

Yes [] No []

36. When did you last attend such training?

í í

37. Which institution was providing such training?

í í

38. Do you have skills of managing e-Records?

Yes [] No []

39. Is the management of electronic records part of your job description?

Yes []

No []

40. If yes has any training on e-Records management been consciously organized for you?

Yes []

No []

41. Which of the following best indicates your training needs in records management?

(Please tick all the applicable options)

(a) Managing paper records during their entire life cycle []

(b) Managing electronic records during their entire life cycle []

(c) Computer skills []

(d) Computer applications in records management []

(e) Changing role of registry []

(f) Conservation & Preservation []

(g) Role of archival institutions in managing public records []

(h) Other, please specify

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SECTION 5: INTERNAL AWARENESS OF LINK OF E-RECORD MANAGEMENT WITH E-GOVERNMENT STRATEGY

42. How often the Ministry management and staff are afforded records management and E- government sensitization?

(a)Every time []

(b)Almost every time []

(c)Sometimes []

(d)Almost never []

(e) Never []

43. Are new employees within the ministry taken through an orientation on Records Management and E- government?

(a)Every time []

(b)Almost every time []

(c)Sometimes []

(d)Almost never []

(e) Never []

44. At what level of importance do management and staff place records management as a critical component of the ministry strategies and action plans?

(a) Very important []

(b)Moderately important []

(c)Slightly important []

(d)Low importance []

(e)Not important []

45. How often do you carry out a Records Management customer services survey?

(a) Once a quarter []

(b) Twice a year []

(c) Once a year []

(d) Once in 2 years []

(e)Never []

46. Does staff know which department unit or staff to consult to clarify questions of records management policy and procedures?

(a) Yes, all of them []

(b) Almost all of them []

(c)Some of them []

(d)Almost none of them []

(e)None of them []

SECTION 6: DIGITAL PRESERVATION STRATEGIES

47. What strategies have been put in place for the preservation of e- records?

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48. Which of the following methods do you use for long-term preservation of electronic records?

(a) Migration to another medium []

(b) preservation of hardware []

(c) preservation of software []

(d) print to paper []

(e) Other, please specify

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49. Which of the following explains how computers assist in managing records?

(a) Enhanced storage []

(b) Enhanced retrieval []

(c) Enhanced access []

(d) Enhanced use []

(e) Enhanced security []

(f) Enhanced preservation []

(g) Enhanced communication []

(h) Report generation []

(i) Other, please specify

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50. Do you face challenges in managing electronic records?

Yes []

No []

51. If yes, what challenges do you face in managing electronic records?

(a) Capturing metadata []

(b) Hardware and software dependency []

(c) Changing technology []

(d) Authenticity of electronic records []

(e) Legal admissibility of electronic records []

(f) Preservation of data []

(g) Security of data []

(h) Lack of computer skills []

(i) Lack of policy []

(j) Other, please specify

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Thank you for your time and contribution to this research.

APPENDIX F: QUESTIONNAIRE FOR ACTION OFFICERS

Dear Respondent,

I am a student at the University of Zululand, in the Department of Information Studies. I am carrying out a research as part of the requirements for the award of a doctorate degree (Information Studies). My research is an *assessment of E-records readiness in context of E-government strategy in Swaziland*.

You are kindly been requested to participate in the study because you are creators and users of the e- records within Government Ministries and can shed information on training, E-records awareness and awareness of E-government project.

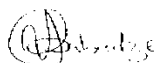
The aim of the study is to assess e-Records readiness in the Swaziland government ministries. The goal of the study is to conceptualise a framework for the effective management of e-Records as a facilitating tool for e-Government. The study will gather data on national legal and policy framework governing management of electronic records; compliance to e-Records management systems; determine the existing e-Records management products and technologies; resource capacity and training for records management staff; level of awareness of link of e-Record management with e-Government strategy and the depth of government wide digital preservation strategies.

I wish to kindly request you to set aside some time (15- 20 minutes) and fill the questionnaire which will enable me obtain data that will address the research questions. Your response will be treated with strict confidentiality and used only for the current study.

Should you have questions about the research please contact me on 76427960 (vtsabedze@idmbls.ac.sz) or my supervisor Dr. Trywell Kalusopa T: +27 (0) 35 902 6878 C: +27 (0) 60 656 75 93 email: KalusopaT@unizulu.ac.za

Thanking you in advance for your time and cooperation.

Yours Faithfully



Vusi W. Tsabedze (PhD Candidate)

13. Are e-Records, e-content products and technologies included in the e-Government strategy?

Yes [] No [] I don't know []

14. What is the level of collaboration between IT and Records Management staff in management of e-Records?

High [] Above average [] Average [] Below average [] Low []

SECTION 4: RESOURCE CAPACITY AND TRAINING FOR RECORDS MANAGEMENT STAFF

15. Is there any designated records management unit (RMU) within Ministry?

Yes [] No []

16. Is the number of records management staff adequate to serve ministry?

- (a) Strongly Agree []
- (b) Agree []
- (c) Neither Agree or disagree []
- (d) Disagree []
- (e) Strongly disagree []

17. What is the competence level of all Records staff on records management (including e-Records management)?

- (a) High []
- (b) Above average []
- (c) Average []
- (d) Below average []
- (e) Low []

18. Based on the functional responsibilities of Records Staff, how would you rate their general remuneration levels?

- (a) Very High []
- (b) High []
- (c) Satisfactory []
- (d) Low []
- (e) Very Low []

19. What is the level of inclusion of records management staff in the human resource strategy of Ministry?

- (a) Very High []
- (b) High []
- (c) Satisfactory []
- (d) Low []
- (e) Very Low []

20. Is the head of Records Management in the Ministry adequate in terms of strategic authority positioning and to influence management decisions?

- (a.) Strongly Agree []
- (b) Agree []
- (c) Neither Agree or disagree []
- (d) Disagree []
- (e) Strongly disagree []

SECTION 5: INTERNAL AWARENESS OF LINK OF E-RECORD MANAGEMENT WITH E-GOVERNMENT STRATEGY

21. How often the ministry management and staff are afforded records management and E- government sensitization?

- (a) Every time []
- (b) Almost every time []
- (c) Sometimes []
- (d) Almost never []
- (e) Never []

22. Are new employees within the ministry taken through an orientation on Records Management and E- government?

- (a) Every time []
- (b) Almost every time []
- (c) Sometimes []
- (d) Almost never []
- (e) Never []

23. At what level of importance do management and staff place records management as a critical component of the ministry strategies and action plans?

- (a) Very important []
- (b) Moderately important []
- (c) Slightly important []
- (d) Low importance []
- (e) Not important []

24. How often are Records Management customer services surveys carried out?

- (a) Once a quarter []
- (b) Twice a year []
- (c) Once a year []
- (d) Once in 2 years []
- (e) Never []

25. How would you rate your level of awareness on records management?

- (a) Very High []
- (b) High []
- (c) Satisfactory []
- (d) Low []
- (e) Very Low []

26. Do you know which unit/ department or staff within the ministry to consult for addressing questions on records management policy and procedures?

- Yes [] No []

SECTION 6: DIGITAL PRESERVATION STRATEGIES

27. What strategies have been put in place for the preservation of e- records?

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28. Which of the following methods do you use for long-term preservation of electronic records?

- (a) Migration to another medium []
- (b) preservation of hardware []
- (c) preservation of software []
- (d) print to paper []
- (e) Other, please specify

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í .

29. Do you face challenges in managing electronic records?

- Yes [] No []

30. If yes, what challenges do you face in managing electronic records?

- (a) Capturing metadata []
- (b) Hardware and software dependency []
- (c) Changing technology []
- (d) Authenticity of electronic records []
- (e) Legal admissibility of electronic records []
- (f) Preservation of data []
- (g) Security of data []
- (h) Lack of computer skills []
- (i) Lack of policy []
- (j) Other, please specify

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Thank you for your time and contribution to this research.

APPENDIX G: OBSERVATION SCHEDULE

Date of Observation				
Department				
	Items to be observed	Indicators	Observation Responses	
No			Yes	No
1	National legal and policy framework	Swaziland National Archives Act		
2	Records and Information Policy and Procedures	Records Policy Records Management Procedures		
3	File Arrangement	Filing, indexing, physical organisation		
4.	Storage and Security Of Paper Records	Storage media, storage space, equipment, layout and design		
5.	Records Management tools	Registers, Retrieval tools (Indexes) Classification schemes		
6.	Appraisal and retention scheduling	Presence of retention schedules, records earmarked for disposal, records disposal certificates.		
7.	IT Infrastructure Existence of computers No. of computers If networked Computer applications in records management	ICT equipment, software, networking, etc		
8	E-Records	Type of records, Storage media, software applications,		

		organisation (by cause, type, content), access and use, file retrieval tools, file tracking tools, criteria for searchability, retention, disposal back-up, audit trails, firewalls, antivirus, disaster preparedness		
9.	Record Management Staffing	Records Management staff		
10	Long-term preservation	Preservation strategies		

APPENDIX H: THE ARCHIVES ACT NO.5, 1971

THE ARCHIVES ACT NO.5, 1971

Date of commencement: 17th March, 1972.

Date of assent: 13th May, 1971.

An Act to provide for the custody, care and control of public archives in Swaziland and for matters incidental there to.

Short title.

1. This Act may be cited as the Archives Act No.5, 1971.

Interpretation.

2. In this Act, unless the context otherwise requires

“archives” means any document or record received, created, or accumulated in a government office or an office of a local authority during the conduct of affairs in that office and which is from its nature or in terms of any other Act not required then to be dealt with otherwise than in accordance with this Act, and any document of record acquired under section 6;

“Director” means the person appointed under section 4;

“Minister” means the Minister for Tourism, Environment and Communication;

“national archives” means the Swaziland National Archives established under section 3;

“record” includes any newspaper, book, document, periodical, pamphlet, poster, or other printed matter or a writing typescript which has in any manner been reproduced, or any drawing, picture, illustration, woodcut or similar representation, or any plan, negative print, photograph, engraving or lithograph, or any record or other material, Contrivance or device by means of which information can be conveyed and words or images reproduced either in sound or light.

Establishment of national archives.

3. There shall be established a Swaziland National Archives wherein shall be stored for better preservation such of the archives as are transferred to it or acquired by the Director under this Act.

Director.

4. (1) There is hereby created the post of Director of the national archives who shall be a public officer.

(2) The Director shall be charged with the custody, care and control of archives and may, subject to subsection (3) do all things necessary or expedient for maintaining the utility of the national archives, and without affecting the generality of the foregoing, may in particular ô

(a) With the agreement of the Minister regulate the conditions under which members of the public may inspect archives or use the other facilities of the national archives;

(b) With the approval of the Minister lend archives for display at commemorative exhibitions or for other special purposes;

(c) Advise any person charged with the custody, care or control of any archives, in regard to the custody, care and filing thereof;

(d) With the approval of the Minister by donation, exchange or otherwise dispose of any archives which are redundant or unsuitable to any library, museum, or other body;

(e) On the application of any person and on payment of the prescribed fee, do research into archives and make copies thereof or extracts therefrom for that person;

(f) With the approval of the Minister publish or cause to be published or authorize the publication of any archives or original sources of a thesis or other work based on a study of the archives or those sources.

(3) The Director shall, in addition, perform such other duties in connation with the archives as the Minister may direct or prescribe.

(4) Nothing in this section shall be construed as authorizing the Director or any person to do anything which is contrary to law or the conditions under which any archives were acquired.

Transfer of archives to national archives.

(5) All archives in a government office or any office of a local authority which are older than a prescribed age, and which are not in terms of any law required to be kept in the custody of a particular person shall be transferred to the national archives:

Provided that ô

(a) The Minister may, if he deems fit, at the request of any person charged with the custody, care or control of archives, grant permission that such archives or any portion thereof be retained in the office in question; and

(b) The Director may

(i) defer the transfer of such archives until such time as he deems fit;

(ii) grant permission that any archives which are less than the prescribed age be transferred to the national archives.

Acquisition of documents and records for national archives.

6. (1) The Director may on behalf of the Government acquire by purchase or donation or on loan for a temporary period or in perpetuity, either unconditionally or subject to such conditions as may be agreed upon, any document or record which in his opinion has, or may acquire, any historical value.

(2) Subject to any conditions which may be applicable any document or record so acquired shall be deposited in the national archives.

(3) A person who has made use of the archives in connexion with the production of any written matter shall, if that written matter has been published or duplicated, at the request of the Director furnish him with a copy thereof free of charge and that copy shall be deposited in the national archives.

Disposal of archives.

7. If it appears to the Director that any archives in the national archives are duplicated by other archives which have been selected for permanent preservation or that there is some other special reason why they should not be permanently preserved, he may, with the approval of the Minister, authorize the destruction of those archives or, with that approval, their disposal in any other way:

Provided that at least six weeks before the destruction of any archives, a list of items to be destroyed shall be tabled by the Minister in both Houses of Parliament.

Access to archives.

8. (1) Archives, other than those to which members of the public had access immediately before the commencement of this Act, shall not be available for public inspection until they have been in existence for such period as the Minister may

prescribe in respect of any particular class of archives.

(2) Without prejudice to the generality of subsection (1), if it appears to the Director that any archives selected for permanent preservation under this Act contain information which was obtained from members of the public under such conditions that the opening of those archives to the public after the period determined under subsection

(1) Would or might constitute a breach of good faith on the part of the Government or on the part of the persons who obtained the information, he shall inform the Minister accordingly, and those archives shall not be available for public inspection even after the expiration of the said period, except in such circumstances and subject to such conditions, if any, as the Minister may prescribe.

(3) Subject to subsection (2) and to any other law which prohibits the disclosure of information obtained from the public except for certain limited purposes, the Director shall arrange that reasonable facilities are available to the public for inspecting and obtaining copies of archives in the national archives.

(4) Notwithstanding anything in this Act

(a) the Minister may on the grounds of national security or defence direct that access for a specified period to any such archives be withheld; and

(a) the Director may refuse to allow access to any archives on the ground of their fragile condition and may refuse to allow access to any archives pending the classification, repair, or other treatment thereof.

Regulations.

9. (1) The Minister may, after consultation with the Director, make regulations for carrying into effect the purposes and provisions of this Act as to

(a) the custody, care, microfilming and filing of archives;

(b) the inspection and destruction under this Act or achieved by the Director;

(c) the transfer of archives from Government offices or the offices of public authorities to the national archives;

(d) the admission of the public to Government offices and offices of public authorities in which archives are kept, and the use of equipment for the making of copies of, or extracts from, archives;

(e) the tariff of fees payable for supplying copies of, or extracts from, the national archives or for research undertaken by the Director at the request of any person, and the manner in which payment of those fees will be made; and

(f) generally, the better carrying out of the objects of this Act.

Offences.

10. (1) A person who

(a) wilfully damages any archives;

(b) otherwise than in accordance with this Act or any other law, removes or destroys any archives;

(c) contravenes or fails to comply with any condition of an authority granted under section 8; or

(d) contravenes a regulation issued under section 9;

shall be guilty of an offence and liable on conviction to a fine of two hundred emalangeni or imprisonment for twelve months, or both.

(2) The Director may refuse access to the national archives, for such period as he may deem fit to a person convicted of an offence under subsection (1), subject to the right of appeal to the Minister whose decision shall be final.

Exemption from liability in respect of certain acts and omissions and limitation of actions.

11. (1) No person shall be civilly or criminally liable for any act or omission by him in the performance of his functions or what he bona fide believes to be his functions under this Act, provided the act of omission was bona fide and not due to negligence, nor shall the Government be liable for any such act or omission.

(2) If in any legal proceeding a person alleges that such act or omission was not bona fide or was due to negligence, the onus of proving that such was the case shall be on him.

(3) Any civil proceedings against the Government or any person in respect of any such act or omission shall be commenced within six months after the cause of action has arisen:

Provided that the High Court may, on good cause shown, extend such period.

APPENDIX I: PARTICIPANT INFORMED CONSENT

INFORMED CONSENT DECLARATION (Participant)

Project Title: The assessment of e-Records readiness in context of e-Government strategy in Swaziland

(Vusi Tsabedze) from the Department of Information Studies, University of Zululand has requested my permission to participate in the above-mentioned research project.

The nature and the purpose of the research project, and of this informed consent declaration have been explained to me in a language that I understand.

I am aware that:

1. The purpose of the research project is to assess e-records readiness in the government ministries in Swaziland with a view to proposing an effective framework for the management of e-records as a facilitate tool for e-government.
2. The University of Zululand has given ethical clearance to this research project and I have seen/ may request to see the clearance certificate.
3. By participating in this research project I will be contributing towards the body of knowledge on records management in a bid to inform decision makers on best practices.
4. I will participate in the project by feeling up the questionnaire/ participating in the interview.
5. My participation is entirely voluntary and should I at any stage wish to withdraw from participating further, I may do so without any negative consequences.
6. I will not be compensated for participating in the research, but my out-of-pocket expenses will be reimbursed. (*phone calls and lunch*)
7. There may be risks associated with my participation in the project. I am aware that
 - a. the following risks are associated with my participation: time constraint , non-response, unavailability of updated sampling frame.
 - b. the following steps have been taken to prevent the risks: Take a month leave to dedicate for data collection . Use face to face interviews. Follow-up on latest sampling frame.
 - c. there is a 40% chance of the risk materializing.
8. The researcher intends publishing the research results in the form of book chapter However, confidentiality and anonymity of records will be maintained and that my

name and identity will not be revealed to anyone who has not been involved in the conduct of the research.

9. I will not receive feedback/will receive feedback in the form of presentation regarding the results obtained during the study.
10. Any further questions that I might have concerning the research or my participation will be answered by (*Vusi Tsabedze Cell. 76427960/ vtsabedze@idmbhs.ac.sz*)
11. By signing this informed consent declaration I am not waiving any legal claims, rights or remedies.
12. A copy of this informed consent declaration will be given to me, and the original will be kept on record.

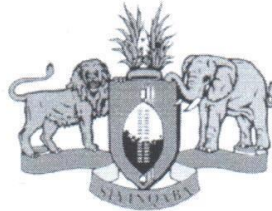
I, í .. have read the above information / confirm that the above information has been explained to me in a language that I understand and I am aware of this document's contents. I have asked all questions that I wished to ask and these have been answered to my satisfaction. I fully understand what is expected of me during the research.

I have not been pressurised in any way and I voluntarily agree to participate in the above-mentioned project.

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Participant's signature

í í í í í í í í í í í í í í í í í í .
Date

**APPENDIX J: LETTER OF APPROVAL TO CONDUCT THE STUDY FROM
SWAZILAND NATIONAL ARCHIVES**



SWAZILAND NATIONAL ARCHIVES

Telephone: 41 61276
Fax: + 268 - 41 61241
Email: director_archives@gov.sz

Swaziland National Archives
P. O. Box 946
Mbabane

Our Ref: ICT/SNA 10/1

20 July, 2016

Your Ref:

Dear Mr. V.W Tsabedze
P. O. Box 3618
Mbabane

Dear Sir.

The assessment of e-Records readiness in context of e- Government strategy in Swaziland

The above mention maters refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that after completion of the study a copy should be submitted to Swaziland National Archives to serve as a resource.
3. You are also prepared to assist in the interpretation and implementation of the study recommendation where possible.

Your cooperation will appreciated.


D. F. K. MTHETHWA
DIRECTOR - ARCHIVES

APPENDIX K: ETHICAL CLEARANCE LETTER FROM UNIVERSITY OF ZULULAND

**UNIVERSITY OF ZULULAND
RESEARCH ETHICS COMMITTEE**
(Reg No: UZREC 171110-030)



RESEARCH & INNOVATION

Website: <http://www.unizulu.ac.za>
Private Bag X1001
KwaDlangezwa 3886
Tel: 035 902 6731
Fax: 035 902 6222
Email: MdutshaneN@unizulu.ac.za

ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2017/436				
Project Title	The assessment of e-Records Readiness in the Context of e-Government Strategy in Swaziland				
Principal Researcher/ Investigator	Tsabedze V				
Supervisor and Co-supervisor	Prof D Ocholla				
Department	Information Studies				
Faculty	Arts				
Type of Risk	Low risk – Desktop research				
Nature of Project	Honours/4 th Year	Master's	Doctoral	<input checked="" type="checkbox"/>	Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

- Special conditions:
- (1) This certificate is valid for 2 years from the date of issue.
 - (2) Principal researcher must provide an annual report to the UZREC in the prescribed format [due date-01 July 2018]
 - (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.
 - (4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research.



 Professor Gideon De Wet
 Chairperson: University Research Ethics Committee
 Deputy Vice-Chancellor: Research & Innovation
 04 December 2017

CHAIRPERSON UNIVERSITY OF ZULULAND RESEARCH ETHICS COMMITTEE (UZREC) REG NO: UZREC 17 1110-30 05-12-2017 RESEARCH & INNOVATION OFFICE

APPENDIX L LIST OF PUBLICATIONS

Journal articles

Tsabedze, V & Kalusopa, T (2017). E-records readiness in context of e-Government strategy in Swaziland. African Journal of Library, Archives and Information Science. Submitted

Book Chapter

Tsabedze, V & Kalusopa, T. (2017).E-records readiness maturity model for Swaziland. Diverse Applications and Transferability of Maturity Models. Submitted

Conference papers

Tsabedze, V & Kalusopa, T. (2017). E-records readiness in context of e-Government strategy in Swaziland. Paper presented at ESARBICA XXIVth General Conference 2017, Lilongwe, August.

Tsabedze, V & Kalusopa, T (2016). E-records readiness in context of e-Government strategy in Swaziland. Paper presented at 17th Information Studies (IS) Annual Conference 2016. South Africa