MANAGEMENT SUPPORT AND IMPLEMENTATION OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEMS IN KWAZULU-NATAL (KZN)

Steven Parbanath, Durban University of Technology
Ivory Ndebele, Durban University of Technology
Celani John Nyide, Durban University of Technology
Bongi Ndlovu, Durban University of Technology

ABSTRACT

E-government implementation initiatives achieve different levels of success in implementing Electronic Document and Records Management Systems (EDRMS). Studies have indicated that only a small percentage of e-government systems in developing countries are successfully implementing EDRSM while the implementation in most countries is either total or partial failures. Studies have shown that e-government failures in developing countries are mainly due to the following: an absence of training schemes and suitable staff, a lack of educating employees about the value and benefits of adopting e-government systems and a large design gap where off-the-shelf systems that are taken from developed countries and imposed developing countries. However, very little research has been conducted on management support in ensuring that systems in e-government are successfully implemented. This study aims to determine the extent to which a lack of management support has contributed to a partial or complete failure of e-government systems in KwaZulu-Natal (KZN). This study contributes to a lack of quantitative research in the implementation of e-government systems. Solutions to mitigate the problems to achieve a fair degree of success in the implementation of EDRMS are also suggested.

Quantitative data was collected from employees at KwaZulu-Natal (KZN) Department of Cooperative Governance and Traditional Affairs (COGTA). The data was analyzed using the Statistical Package for Social Sciences (SPSS). Purposive sampling for the quantitative data was used to select a sample size of 181 participants out of 341 population.

The results of the study revealed that poor planning and a lack of management support are the main factors that hindered the implementation of EDRMS at KZN COGTA. Changes in management during the implementation of EDRMS also contributed to partial or total failures in this regard. The results also indicated that management inputs, such as decision-making, planning and information dissemination are critical in the successful implementation of EDRMS.

Keywords: Management support; Record management; Support electronic document; Records management systems; Enterprise content management system (ECM).

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INTRODUCTION

KwaZulu-Natal is a coastal South African province known for its beaches, mountains and savannah populated by big game. It is the largest of 9 provinces in terms of land mass and the second largest in terms of population with around 11.1 million people. The KwaZulu-Natal Department of Cooperative Governance and Traditional Affairs (COGTA) are responsible for the record keeping of citizens that reside in this province. Record keeping was done using the traditional method which was mostly paper based. This traditional system had many drawbacks such as poor workflow, delays in the approval processes, loss of documents and issues relating to storage of the physical documents. The system was also time-consuming when attempting to retrieve information. Due to these deficiencies, the National Archives and Records Service of South Africa (NARSSA) (2016) embarked on a project to implement the EDRMS. According to NARSSA (2016), the public sector should fully commit to the planned e-government strategy. The EDRMS was supposed to address the problems experienced by the traditional record keeping system. However, EDRMS has only achieved partial success and the system is not yet been fully implemented. The focus of this study is to therefore investigate the impact of management support in implementing EDRMS at KZN COGTA. The study aims to determine the level of management support during the implementation of EDRMS regarding:

- Educating employees in terms of the vision, mission, policies, and legislation
- Motivating employees to adopt EDRMS by articulating its significance and its benefits.
- Making employees aware of the envisaged system and addressing issues relating to change, including them during the planning phase as well as collaborating with various levels of management. User requirements should also be taken into consideration.
- Training employees in using the Enterprise Content management System (ECM)
- Security and privacy considerations.
- Providing feedback and support when problems are encountered.
- Providing adequate Infrastructure and resource.
- Integrating the System in the various levels.

The research problem focuses on the following question: Is there a significant impact of Management support for the successful implementation of EDRMS in the following areas: planning, education, training, motivating employees, the provision of adequate infrastructure, security and adequate resources? Further, does management have the relevant competencies and skills necessary to successfully implement EDRMS? The main contribution to the study is the information contained in the National Archives and Records Service of South Africa (NARSSA) (2016) as well as the responses from employees at the Department of KZN COGTA.

This study will contribute to a lack of quantitative research on the e-government systems. Further, the Department of KZN COGTA can use the results to improve the adoption of e-government systems.

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STUDY HYPOTHESIS

This study is based on the following hypotheses:

HO: Management support in the areas of awareness, planning, education, training, motivating employees, the provision of adequate infrastructure, security and resources will most likely result in implementation success of EDRMS.

HO1: Employees will be motivated to participate in the EDRMS if they are aware of the vision and mission of the organization.

HO2: Employees will be motivated to participate in the EDRMS if they are aware of the significance and benefits of implementing this system.

HO3: The implementation of EDRMS will most likely succeed if management and employees are educated on the policies and legislation regarding the implementation of EDRMS.

HO4: Employees will most likely participate in EDRMS if they are adequately trained and are not resistance to change in the EDRM

HO5: EDRMS will succeed if security and privacy issues, budget, infrastructure, and resources are considered by management.

HO6: EDRMS will most likely succeed if there is collaboration and integration between various units.

HO7: Employees will be motivated to participate in the implementation of EDRMS if their inputs are taken into consideration.

THE BENEFITS OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEMS (EDRMS)

Smallwood (2013) describes the Electronic Document and Records Management System (EDRMS) as a software that can store and track electronic documents. The primary function of an EDRMS is to manage electronic information within a departmental workflow. A well-implemented EDRMS will provide better security methods in procedures used to deal with government documents (Abdulkadhim et al. 2015). The main aim of EDRMS is to assist departments to ease document and records management through the information life cycle, from the formation to its disposal. Nengomasha and Chikomba (2018) elaborate that EDRMS support organizations with their workflow methods. It allows employees to find and share documents easily. Read and Ginn (2016) state that, due to technological changes, many organizations are developing processes that eliminate the number of generated physical records. The issue with physical records is that it is time-consuming. It also costs money as many paper copies are made, files are often lost, and the workflow progress is not well monitored (Read & Ginn 2016). Implementing EDRMS in an organization brings a positive change in many ways as there is an increase in operational efficiency because time spent searching for information is reduced. It also helps reduce costs associated with storing and managing documents as every process is kept on the system. The Enterprise Content Management (ECM) provides departments with a central source for archiving data regarding information security, thereby reducing the risk of information lost from physical drives. It further encodes data transfer from capture to archival, offers access to the right users, and eradicates data leakage (Dataquest 2018). EDRMS also allows for

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declaring information as departmental records and the retention and disposal thereof. The origin of the record must be kept once and then declared as a departmental record. Moreover, keeping the connectivity between records and files is crucial. Also, maintaining connectivity between file series and the file plan that the department works on ensures that records are dealt with in an accurate manner (NARSSA 2016). Computerized routing of documents is achieved from the beginning to the final stage depending on its work processes. This system helps expedite approval and other department decision processes as the official can perform their duties even when out of the office. Using EDRMS also makes it easy to generate, manage and disseminate reports across various departments (Smallwood 2013).

THE ROLE OF MANAGEMENT IN THE SUCCESSFUL IMPLEMENTATION OF EDRMS

Management Support

Management support is the degree to which management understands the importance of the IS function and the degree to which it is engaged in IS activities. Management involvement in the implementation of EDRMS is of vital importance. Nengomasha and Chikomba (2018) regard it as the critical success factor; hence the successful implementation of EDRMS depends on them. They must ensure the availability of necessary resources and funds for the running of the system. Further, they must ensure that proper training is done and encourage staff to use the system. Rivera-Ruiz and Ferrer-Moreno (2015) mentioned that strategic leadership is needed to ensure that its goals are met. Khan et al. (2014) stated that management support can be viewed as a moderator between project leadership and project success. They further emphasized that management should avail themselves as project champions for the successful implementation of IT projects.

Planning

Proper planning plays a significant role in the implementation of any project. Without a clear vision, goals and adequate framework in place, the IT project is negatively impacted. (Abdulkadhim et al., 2015; Mashiloane & Jokonya, 2018). According to Joshi & Islam (2018), management should consider the end-users views when planning or making decisions on an e-government project to be implemented.

Legislation

Before attempting the implementation process, management needs to ensure they first study the legislation requirements on the implementation of EDRMS (Abdulkadhim et al., 2015). Management should also educate its employees on the laws governing the implementation of EDRMS. Proper policies related to the system need to be in place so that the whole process could be done accordingly.

Staff Awareness

Awareness is the most crucial stage, which should go along with the introduction of the implementation initiative. End-users should be aware and prepare for the change to occur

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(Abdulkadhim et al., 2015, Joshi & Islam, 2018). It might seem minor but has considerable consequences in the end.

Collaboration

Cooperation between all parties involved in the implementation phase, including IT, is another crucial factor that should be considered by management (Abdulkadhim et al., 2015). If parties do not work hand in hand to achieve the goals stipulated when planning, the implementation process is likely to fail. Wiggins (2016) attest that it is imperative that parties involved in the project's outcome develop a communication protocol through the project management structure, which includes: Programme Management, Senior Executive, Senior User, Senior Supplier, Project Manager and Team Manager. Mashiloane and Jokonya (2018) reveal that the lack of communication negatively affects the project's running as it also damages the organization's reputation.

ICT Infrastructure

Infrastructure is another essential factor to be seriously considered when dealing with e-government initiatives. According to Laudon & Laudon (2019), "IT infrastructure provides the foundation or platform for supporting all the information systems in the business". It comprises five components: computer hardware, software, data management technology, networking and telecommunications technology, and technology services. Dynamic electronic records infrastructure is needed to assimilate EDRMS to the current organizational procedures to become compulsory for end-users to use the system (Mosweu et al., 2016). Singh (2016) elaborates that ICT systems need to be maintained regularly which includes system upgrade and licensing requirements.

Budget

According to Abdulkadhim et al. (2015), lack of funds is considered an enormous challenge that negatively impacts the implementation phase's success. It is another factor that management needs to look at and ensure that enough funds are available to keep the implementation running. Mzekandaba (2017) reports that funding is a considerable disruption in e-government initiatives' implementations because the national budget does not cover the expensive e-government technologies required by governments departments.

User Requirements

The system implemented should undoubtedly serve the purpose of being implemented. All modules specified or agreed upon should be implemented and used successfully by the end-user. If the user requirements are not met, then the implementation is not successful (Abdulkadhim et al. 2015).

Security and Privacy

According to the SA, DTPS (2017), government departments work in situations whereby electronic documents, records and ICT systems need to be protected from illegal access.

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Cooperation between officials should be achieved without fear of security measures. E-government services are accessed through the internet's availability, and if web sites are cracked, then the government information can be accessed and altered by hackers. The SA, DTPS (2017) stresses that full security measures comprising of six features, namely: prohibition, deterrence, prevention, detection, recovery, and correction thereof, should be considered. According to Abdulkadhim et al. (2015), organizational information is critical, and it is the ICT unit's responsibility in conjunction with management to safeguard it and provide security measures to prevent unauthorized access. Leaking the information also leads to a lack of trust. Swaminathan and Meffert (2017) stressed that "security measures should be built into all components whether hardware, software, and middleware." Furthermore, security challenges can only be detected if these components are maintained and tested regularly.

System Integration

System Integration (SI) is an IT process that enables merging different subsystems to make a single system (Marutha & Ngulube, 2018). Subsystems combined are EDMS (Electronic Document Management System) and ERMS (Electronic Records Management System) to form a single system which is EDRMS. It ensures that each subsystem implemented functions correctly and as anticipated. Organizations use SI (System Integration) for the advantage of gaining excellent operations (Lehtonen, 2018). One respondent in the interview session revealed that integration of systems was another challenge experienced during the implementation process. Costs and technology are the main factors hindering the successful integration of e-government implementations (Mzekandaba, 2018).

Staff Training

After all the processes have been done, management needs to ensure that employees need to be well trained in using the implemented IT system. It is also essential to see if they possess the right skills to adapt to the new technology (Abdulkadhim et al., 2015). Mosweu (2016) highlighted that the full implementation of EDRMS alone does not ensure that end-users are familiar with the system. Management should ensure that continuous refresher courses need to be conducted until users ultimately adopt the use of the system. After training has been done, manual processes must be stopped, and users are given a platform to use the system to perform their duties (Mosweu, 2016).

Resistance to Change

User's reluctance to adapt to the new technology might be the results of a combination of various factors already mentioned by Abdulkadhim et al. (2015). These factors include employees not formally being informed about the change to occur, problems with ICT infrastructure, the training not adequately conducted, and the system not being user-friendly.

According to Mosweu (2016), change management goes along with communicating with the end-users about the implemented system properly. Users may resist change because they do not know the importance of the implemented system. Commonwealth of Australia (2011) cited by Mosweu (2016) contends that change management is not only about moving from manual to

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digital records, but senior management should demonstrate how organizational information will be managed. Effective change management ensures user buy-in to the implemented EDRMS.

REQUIREMENTS BY THE NATIONAL ARCHIVES AND RECORDS SERVICE OF SOUTH AFRICA (NARSSA) (2016) ON MANAGEMENT'S ROLE IN IMPLEMENTING EDRMS

1. Management must ensure the availability of necessary resources and funds for the efficient running of the system.
2. There must be proper planning in place with a clear vision and goals.
3. Management must have a thorough knowledge of the legislation around EDRMS.
4. Staff must be made aware about the planning and implementation of EDRMS. Further, staff input such as user requirements must be taken into consideration during the planning and design phases.
5. There must collaborate with the ICT department to ensure the Security and privacy of the records.
6. Staff must be trained, and steps must be taken to alleviate their fears regarding changes to the organization.

Theoretical Underpinning

This study is underpinned using the Leadership Competency Theory of Project Performance (Muller & Turner, 2017) and the Management Theory of Henry Mintzberg (1973). According to Muller and Turner (2017), project success could easily be achieved through managerial competencies. They further state that various kinds of competencies are needed for a variety of projects. The significant competencies for IT and organizational change projects are communication, self-awareness, developing others and motivation.

The situational requirements include managing resources, critical analysis and judgement, strategic viewpoint, emotional flexibility, influence, and faithfulness. However, successful managers do not limit themselves in competencies that they can acquire to choose and combine those relevant for a project at hand at a given time (Muller & Turner, 2017). Figure 2.8 is an illustration of a leadership competence-based theory of project performance:

The combination of situational requirements only limits the chances of project success. Furthermore, if organizational principles and user requirements do not match with the project success criteria, the project is bound to fail. On the other hand, enablers that can lead to project success involves the development of leadership competencies. This can be attained through education, short courses within the department and mentoring. Moreover, if organizational principles and user requirements match the project success criteria, project success chances are very high. The central part is the correct combination of leadership competencies in each project result in project performance. Furthermore, the leadership competency theory of project performance correlates with the managerial roles provided in Mintzberg's view.

Mintzberg (1973), reviewed by Caramela (2018) provide management with a clear responsibility to be played in their positions. Mintzberg's theory is linked to this study because a manager cannot offer full support for any project implementation if they lack managerial roles. Management is expected to uphold the vision, strategy, and communication throughout the project implementation's lifecycle (DaSilva et al., 2019). According to Muller and Turner (2017),

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different managerial competencies are required for various projects. This theory analyses the management roles and duties of a manager to organize the workplace and streamline difficult concepts (Caramela, 2018). According to Robbin and Coulter (2018), management roles are the actions or responsibilities expected from a manager. Managers encounter different problems every day, and decisions that seem right today might not be on the next day (Caramela, 2018). Mintzberg resolved that managers' responsibilities can best be described by observing the roles they are involved in daily. This study focused mainly on management's support and implementation of EDRMS. One of the objectives of this study was to determine the role played by management in EDRMS implementation. Therefore, this theory encompasses all aspects needed by a manager in any private or public organization. Moreover, this theory is used because a manager cannot offer full support for any project implementation if they lack managerial roles.

Mintzberg (1973), cited by Robbins and Coulter (2018), differentiates management roles into three categories: interpersonal, informational and decision making.

Interpersonal Roles

Mintzberg (1973), cited by Caramela (2018), believes that the manager needs to show confidence so that everyone feels secure and supported and gains confidence that the job will be performed accordingly. They professionally represent their company. They are leaders who communicate, coach, and guide their team towards a specific goal. To keep things running smoothly, they should interact with different people both within and outside the department and convey necessary information. Th results of this study indicated that management discourages the successful implementation of EDRMS by not fully committing themselves and by not convincing the staff about the advantages of using the system. If a manager does not have interpersonal roles, surely, he will fail to gain employees commitment and trust in return.

Informational Roles

Factors like staff awareness appeared to hurt the implementation process if management does not pay special attention. It can also lead to resistance to change, not because the system is not user-friendly, but because the user is not aware of its significance (Abdulkadhim et al., 2015). The results of this study indicated that management is the most important factor that drives the success of the EDRMS implementation because they are to provide support from the beginning to the final stage of the implementation process. Management should emphasize the expected actions so that they are continuously repeated and, at the same time, lead by example. Mintzberg (1973), cited by Caramela (2018), state that the successful manager is the one who always monitor the situation he or she is responsible for and make quick changes when necessary. A manager has to relay all valuable information to his team. Specific projects fail because relevant information is not disseminated at the right time.

The results of this study indicated that management needs to know what the organization needs to achieve. It further revealed that the goals should be specific, measurable, attainable, realistic, and timely (Lack, 2018). Therefore, it is the management's responsibility to ensure that employees are well informed about implementing EDRMS in a department.

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Decision Making Roles

Mintzberg (1973) recommends that managers should act like entrepreneurs in terms of urgently resolving issues that arise. They should also inspire change and innovation. It is always the case that there would be hindrances along the way during the implementation of a project. Being a manager means that you should be able to handle those hindrances appropriately. To meet the organizational goals and objectives, managers should use what they have available. Resources can include the budget for the project, raw materials, and employees.

METHODOLOGY

Research Approach

A quantitative research approach was adopted. This approach was most suitable as the questionnaire was distributed to large number of respondents (185). Further, the questionnaire was distributed online which makes the quantitative approach more suitable in terms of a speedy response and data analysis.

Study Sample

The researcher employed purposive or judgemental sampling for the quantitative method. The population targeted for this study were the government employees from the Department of KZN COGTA and officials from the system service provider. These employees were targeted because they have knowledge of the traditional record management system as well as the current electronic system. They will be able to provide valuable inputs as to why the new electronic systems have partially or completely failed. A sample was drawn based on the ECM (Enterprise Content Management) report and officials that are live on the system. This information was obtained from ICT within the Department of KZN COGTA. The questionnaire was distributed to 181 COGTA officials that were trained to use ECM. The number of responses that were returned was 105. Therefore, the quantitative response rate was 58. According to Weedmark (2019) a minimum response rate of between 30% to 40% is acceptable if the study was done internally amongst employees. This means that the response rate of 58% achieved in this study is acceptable.

Data Collection

Biographical information such as age, sex, position currently held in KZN COGTA, and highest education qualification attained was collected. Data was collected using a questionnaire with Likert type questions with 5 = strongly agree, 4 = Agree, 3 = Not Sure, 2 = Disagree and 1 = Strongly Disagree. The questionnaire was formulated based on the aims of the study. The first set comprised nine questions related to the impact of EDRMS in the Department of COGTA. The second set includes six questions relating to the factors affecting the implementation of EDRMS in the Department of KZN COGTA. The last group comprised six questions and were related to management's role in implementing EDRMS in the Department of KZN COGTA.

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Data Analysis

The analysis of the data and the testing of the hypothesis was done using the Statistical Package for Social Sciences (SPSS). The following statistical tools were used:

1. Pearson correlation coefficient was used to test the existence of the phenomenon of multiple linear correlations. This coefficient was used to correlate the following:
    i. The impact of Electronic Document and Records Management System in the organization with the various opinions of respondents.
    ii. The respondent's opinions and feelings regarding the factors affecting the implementation of Electronic Document and Records Management System.
    iii. The respondent's opinions regarding the role played by the management on the implementation of Electronic Document and Records Management Systems.
2. Cronbach's Alpha was used to test the stability of the study tool.
3. The Chi-Square test was used to test the hypotheses.

Validity and reliability are the most common concerns that arise when the method of questionnaire is used for collection of data. Since this questionnaire has been subdivided into 3 constructs, the validity of this questionnaire rests on whether the group of items or questions that purport to measure a particular construct do measure that construct. The standard approach to establish whether the questionnaire is valid or not is to examine the correlation coefficients for each construct. On the other hand, reliability measures whether the items that propose to measure a given construct would produce similar results if they were applied repeatedly under similar conditions on different occasions. The most used measure to assess reliability of a questionnaire is the Cronbach's alpha. In Table 1 to Table 3, the correlation coefficients amongst the items that constitute each of the constructs are displayed. The calculations were performed using SPSS Version 27.

The first objective of the study was to determine the impact of Electronic Document and Records Management System in the organization. The following dimensions were considered (Table 1):

N1: EDRMS is far better than managing and maintaining physical/paper records.
N2: Ever since the Enterprise Content Management (ECM) system was introduced, it has been used extensively by staff.
N3: End-Users find it easy to work with the ECM system.
N4: ECM has brought a positive change in the way the staff does filing.
N5: The system has high security measures to cater for filing of confidential documents.
N6: The ECM is very versatile because it performs numerous tasks such as routing of documents, detection of files due for destruction etc.
N7: The retrieval of documents is now much quicker.
N8: ECM provides adequate storage space for the staff to perform their respective duties satisfactorily.
N9: The ECM system has significantly improved and shortened the approval processes.

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TABLE 1
CORRELATION COEFFICIENTS OF IMPACT OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEM IN THE ORGANIZATION

		N1	N2	N3	N4	N5	N6	N7	N8	N9
N1	Pearson Correlation	1	0.187	0.339**	0.210*	0.246*	0.156	0.016	375**	-0.033
	Sig.(2-tailed)		0.059	0.001	0.034	0.012	0.115	0.877	0.000	0.739
	N	103	102	101	102	103	103	102	100	103
N2	Pearson Correlation	0.187	1	0.550**	0.545**	0.409**	0.235*	0.215*	309**	**0.412****
	Sig.(2-tailed)	0.059		0.000	0.000	0.000	0.017	0.029	0.002	0.000
	N	102	104	102	104	104	102	103	101	104
N3	Pearson Correlation	0.339**	0.550**	1	0.653**	0.498**	0.319**	**0.404**	329**	**0.419****
	Sig.(2-tailed)	0.001	0.000		0.000	0.000	0.001	0.000	0.001	0.000
	N	101	102	103	102	103	101	102	100	103
N4	Pearson Correlation	0.210*	0.545**	0.653**	1	0.506**	0.386**	0.642**	286**	0.583**
	Sig.(2-tailed)	0.034	0.000	0.000		0.000	0.000	0.000	0.004	0.000
	N	102	104	102	104	104	102	103	101	104
N5	Pearson Correlation	0.246*	0.409**	0.498**	0.506**	1	0.387**	0.416**	614**	**0.412**
	Sig.(2-talled)	0.012	0.000	0.000	0.000		0.000	0.000	0.000	0.000
	N	103	104	103	104	105	103	104	102	105
N6	Pearson Correlation	0.156	0.235*	0.319**	0.386**	0.387**	1	0.32**	326**	0.387**
	Sig.(2-tailed)	0.115	0.017	0.001	0.000	0.000		0.001	0.001	0.000
	N	103	102	101	102	103	103	102	100	103
N7	Pearson Correlation	0.016	0.215*	**0.404****	0.642**	**0.416**	0.322**	1	0.252*	0.660**
	Sig.(2-tailed)	0.877	0.029	0.000	0.000	0.000	0.001		0.011	0.000
	N	102	103	102	103	104	102	104	101	104
N8	Pearson Correlation	0.375**	0.309**	0.329**	0.286**	0.614**	0.326**	0.252*	1	0.216**
	Sig.(2-tailed)	0.000	0.002	0.001	0.004	0.000	0.001	0.011		0.029
	N	100	101	100	101	102	100	101	102	102
N9	Pearson Correlation	-0.033	**0.412****	**0.419****	0.583**	**0.412****	0.387**	0.660**	0.216*	1

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	Sig.(2-tailed)	0.739	0.000	0.000	0.000	0.000	0.000	0.000	0.029	
	N	103	104	103	104	105	103	104	102	105

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

The second objective of the study was to investigate the factors affecting the implementation of Electronic Document and Records Management System. The following dimensions were considered:

N10: Management has been providing continuous support throughout the implementation of EDRMS.

N11: The department has adequate ICT infrastructure to support successful implementation of EDRMS.

N12: The system is designed as per the departmental EDRMS policy and other legislation requirements e.g., Records Act.

N13: The implementing team (management, training staff, ICT etc.) is working together to ensure successful implementation of EDRMS.

N14: Collaboration between management, the service provider and employees has made EDRMS implementation a success.

N15: End-Users have received adequate and relevant training on ECM.

TABLE 2
CORRELATION COEFFICIENTS OF THE FACTORS AFFECTING THE IMPLEMENTATION OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEM

		N10	N11	N12	N13	N14	N15
N10	Pearson Correlation	1	.240*	.424**	.663**	.631**	.333**
	Sig. (2-tailed)		.015	.000	.000	.000	.001
	N	105	103	103	104	104	105
N11	Pearson Correlation	.240*	1	.382**	.254*	.413**	.280**
	Sig. (2-tailed)	.015		.000	.010	.000	.004
	N	103	103	101	102	102	103
N12	Pearson Correlation	.424**	.382**	1	.481**	.564**	.258**
	Sig. (2-tailed)	.000	.000		.000	.000	.008
	N	103	101	103	102	102	103
N13	Pearson Correlation	.663**	.254*	.481**	1	.649**	.258**
	Sig. (2-tailed)	.000	.010	.000		.000	.008
	N	104	102	102	104	103	104
N14	Pearson Correlation	.631**	.413**	.564**	.649**	1	.286**
	Sig. (2-tailed)	.000	.000	.000	.000		.003
	N	104	102	102	103	104	104
N15	Pearson Correlation	.333**	.280**	.258**	.258**	.286**	1
	Sig. (2-tailed)	.001	.004	.008	.008	.003	
	N	105	103	103	104	104	105
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

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The third objective of the study was to investigate the role played by the management on the implementation of Electronic Document and Records Management Systems. The following dimensions were considered:

N16: Management has informed staff about the significance, vision and mission of the EDRMS in my department.
N17: Management always motivates the staff to use the ECM system.
N18: Resources (adequate computer hardware, supervision, etc.) to cater for the needs of the EDRMS are well provided.
N19: Users always get prompt and relevant support when they encounter problems with ECM.
N20: Management always champions and highlights the benefits of implementation of EDRMS.
N21: Management has necessary skills and competencies that facilitate the successful implementation of EDRMS.

TABLE 3
CORRELATION COEFFICIENTS OF THE ROLE PLAYED BY THE MANAGEMENT ON THE IMPLEMENTATION OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEMS

		N16	N17	N18	N19	N20	N21
N16	Pearson Correlation	1	0.686**	0.385**	0.306**	0.612**	0.558**
	Sig.(2-tailed)		0.000	0.000	0.002	0.000	0.000
	N	104	104	104	104	103	104
N17	Pearson Correlation	0.686**	1	0.337**	0.357**	0.722**	0.466**
	Sig.(2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	104	105	105	105	104	105
N18	Pearson Correlation	0.385**	0.337**	1	0.423**	0.461**	**0.311****
	Sig.(2-tailed)	0.000	0.000		0.000	0.000	0.001
	N	104	105	105	105	104	105
N19	Pearson Correlation	0.306**	0.357**	0.423**	1	0.376**	0.405**
	Sig.(2-tailed)	0.002	0.000	0.000		0.000	0.000
	N	104	105	105	105	104	105
N20	Pearson Correlation	0.612**	0.722**	0.461**'	0.376**	1	0.548**
	Sig.(2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	103	104	104	104	104	104
N21	Pearson Correlation	0.558**	0.466**	0.311**	0.405**	0.548**	1

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	Sig.(2-tailed)	0.000	0.000	0.001	0.000	0.000	
	N	104	105	105	105	104	105

**Correlation is significant at the 0.01 level (2-tailed).

Each table lists the estimates of ρ , the correlation coefficient, which is calculated for each pair of items and the results of a hypothesis test to determine if $\hat{p}$ is significantly different from 0, that is, if.

$$\frac{\hat{p} - 0}{\sqrt{var(\hat{p})}}$$

is significantly different from 0. If this statistic is not significantly different from 0 for a given pair of items, it then implies that that pair of items is not correlated. From Table 1, it was found that variable N1 was not correlated with only a few other items in the construct and on that basis, there were no reason to exclude it from analysis.

Hypotheses Testing

The main thrust of the hypotheses is to establish if the requirements for successful implementation of EDRMS, as characterized by the items of this questionnaire, are met or not. Clearly, an examination of the results per item will indicate if the requirements are indeed satisfied or not. Whilst the examination of the responses may provide answers to these questions, it is also instructive to ascertain if there are any differences in responses according to some biographical variable, especially for those items where there is a suggestion that the requirements are not met. The results of this exercise may assist in pinpointing that segment of staff according to a given biographical variable that may require further intervention regarding that item to improve the chances of a successful implementation of this new programme. Amongst the 6 items that are associated with the hypotheses, there were 2 items that the respondents were dissatisfied with, that is "Management always champions and highlights the benefits of implementation of EDRMS" and "Resources (adequate computer hardware, Supervision) to cater for the needs of the EDRMS are well provided" in relation H03 and H05, respectively as displayed in the Table 4.

TABLE 4
HYPOTHESIS TEST RESULTS

	Agree	**Not Sure**	**Disagree**	**Missing**
H01: Management has informed staff about the significance, vision, and mission of the EDRMS in my department	45.7	18.1	35.2	1
H02: Management always champions and highlights the benefits of implementation of EDRMS	21.9	26.7	50.5	1
H03: The system is designed as per the departmental EDRMS policy and other legislation requirements e.g., Records Act	41.0	44.8	12.4	1.8

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H04: End-Users have received adequate and relevant training on ECM	49.5	21.9	28.6	
H05: Resources (adequate computer hardware, Supervision) to cater for the needs of the EDRMS are well provided	34.3	27.6	38.1	
H06: The implementing team (management, training staff, ICT etc.) is working together to ensure successful implementation of EDRMS	33.3	35.2	30.5	1
H07: Collaboration between management, the service provider and employees has made EDRMS implementation a success	21.0	30.5	47.6	1

There are four biographical variables in this study, namely, *gender, age, qualification, and rank.* To ascertain if regarding these two variables, the biographical variables have an impact on the responses, the appropriate test to apply is the *Pearson's Chi-square test* because the responses are observations on categorical variables. This test is applied to determine if there is any association between two categorical variables if the responses on one variable vary according the other variable or not. One of the critical requirements that must be satisfied for the application of this test is that when data is summarized into contingency table the expected count for each cell in the contingency table should not be less than 5. To satisfy this requirement, *gender* was left as is, *age* was re-categorized into age bands of 18 to 54 and 55 and above, whilst the rank variable was re-categorized into general staff (Administration Staff, Registry Clerk, Chief Registry Clerk, Other), and management staff (ICT Officer, Assistant Director, Deputy Director, Director and above). The Highest qualification variable was re-categorized into two categories where "Below Matric" and "matric" from one category and post matric levels form another category. The results of this test are given in the Table 5.

TABLE 5
PEARSON'S CHI-SQUARE TEST

Management always champions and highlights the benefits of implementation of EDRMS	χ^2_{Calc}	p-value
Gender	8.557	0.014
Age	1.088	0.580
Rank	3.349	0.187
Highest Qualification	0.347	0.841
Resources (adequate computer hardware, Supervision) to cater for the needs of the EDRMS are well provided		
Gender	2.555	0.279
Age	1.240	0.940
Rank	3.965	0.158
Highest Qualification	1.277	0.541

From Table 5, χ^2_{Cal} is significantly different from zero for the hypothesised association between "Management always champions and highlights the benefits of implementation of EDRMS" and G*ender.* In Table 6 we have displayed the contingency table (Table 6) for the two variables.

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TABLE 6
CONTINGENCY TABLE FOR THE TWO VARIABLES

			Agree	Not Sure	Disagree	Total
Gender	Male	Count	7	8	31	46
		Expected Count	10.5	11.8	23.7	46.0
	Female	Count	16	18	21	55
		Expected Count	12.5	14.2	28.3	55.0
Total		Count	23	26	52	101
		Expected Count	23.0	26.0	52.0	101.0

MAJOR FINDINGS

It can be seen from these results that about 67% of males disagree and about 15% agree compared 29% of the females that agree and 38% that disagree. Thus, based on these results, males are of the opinion that management DOES not always champion and highlight the benefits of implementation of EDRMS, whereas females do share the same opinion as males but not as emphatic as their male counterparts.

In summary, regarding H01, H02, F04, H06 and H07 the results suggest that the requirements as stated in these hypotheses are met. Regarding H01, for example, the responses affirm that "Management has informed staff about the significance, vision and mission of the EDRMS in my department". Where the respondents do not affirm that the requirement is satisfied is in respect to H03 and H05. We found that the biographical variable did not inform the way in which responded except that gender was found to influence the responses to the item that is related H03.

RECOMMENDATIONS

1. The system should be designed as per the departmental EDRMS policy and other legislation requirements e.g., Records Act.
2. Management should always champion and highlights the benefits of implementation of EDRMS to its employees.
3. Management should provide resources (adequate computer hardware, Supervision) to cater for the needs of the EDRMS are well provided.
4. Collaboration between management, the service provider and employees is paramount to ensure that EDRMS implementation is a success.

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