



Analysis of the Benefits and Issues in Implementing and Maintaining E-Records - A Case Study of the Federal Ministry of Finance, Nigeria

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Abstract

The study examined the benefits and issues in implementation and maintaining e-records in Federal Ministry of Finance Nigeria (FMFN). Through quantitative approach and qualitative method, data were gathered from the FMFN staff within the selected units and departments. The sample of the study comprised of 60 respondents who are active in the management of e-records. The findings of the study revealed that implementation and maintenance of e-records as resulted to the reduction in the expenditure of the FMFN, Reduction of error and storage space. Besides, the study also discovered some challenges which work against the functioning and thriving of e-records at the FMFN. These are: power shortages in the country, IT infrastructural deficits, poor internet connections as well as inadequate training. The study concluded that proper implementation of e-records is crucial to sustainability of any organisation especially in this present age and despite efforts put in place, ministries, agencies and departments should ensure an ideal mechanism that will foster the effectiveness and efficiency of e-records. The study recommends the need for the FMFN to improve the implementation and maintenance of e-records by making more IT facilities available to various departments and units, providing adequate power supply and training staff on the maintenance of the e-records.

Keywords: e-records, electronic records management System (ERMS), Federal Ministry of Finance Nigeria (FMFN).

1. Introduction

Records management is a systematic set of activities designed to simply control the creation, distribution use, maintenance and disposition of recorded information maintained as evidence of business transactions (Anderson, 2019). It can also be seen as the field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of record including the processes for capturing and maintaining evidence of information about business activities in the form of records (Ajibola, Olatunji, & Oduroye, 2020). In this digital era with a fast technological development, organisations are keeping the pace with the progress and transformation in the process of record management. However, organisation must be aware of the implication of implementing electronic record management system (ERMS). They should be prepared and start planning on what must be done from the side of the management, the aspect that could be affected through the implementation of ERMS (Abdul Hamid, 2018).

Electronic record management system may be described as an electronic system specifically designed to manage the maintenance and disposition of records. They maintain the content, context, structure and links between and among e-records to enable their accessibility and support their value as evidence (Mosweu & Mosweu, 2019).

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ERMS is the process of creating, retrieval, use, managing, maintenance and disposal of records that are electronically, with the aim of providing and preserving evidence of organisational activities. E-records has become an essential element in business activities in both developing and developed countries. E-records is also being increasingly implemented in other bodies such as academic institutions where students, researchers and academics create and access e-records and documents, on-line assessments, course materials, research databases and e-mails. Notably, clause 5.1 of Section 46 in the Code of the Great Britain Department for Constitutional Affairs, 2002 emphasises that the ERMS function should be considered as a particular corporate programme. This programme offers a systematic approach towards records management, and it's generally viewed as the engine for implementation and maintaining the organisation's records management function.

According to the UN (2014) Global report on E-government Development Index for 2014, Nigeria was ranked at position 141. This is an indication of lack of government's commitment towards achieving a fully integrated Electronic Records Management System. ERMS has been receiving global identification as one of the vital development strategies for government, hence, increasing its implementation by various governments. For instance, the government of the Republic of Korea successfully implemented an electronic document management system (EDMS) via a portal website that is integrated to enable its citizens in accessing government services from their offices and homes (E. UN. 2012). In another example, the government of Germany has attained paperless office at all administrative levels in the country by successfully implementing a system known as Document Management and Electronic Archiving (DOMEA) (Abdulkadhim, Bahari, Bakri & Hashim 2015). The above examples are an indication that governments have pursued or are pursuing a common objective of implementing the e-records in order to ensure improvement in the quality of record keeping. This study investigates the benefits and issues in implementing and maintaining e-records at the Federal Ministry of Finance, Abuja, Nigeria. It proceeds by defining the term, electronic records, tracing its evolution and importance in records management in both public (including government departments) and private institutions.

1.1 Background and Contextual Structure: The Federal Ministry of Finance, Nigeria

The Federal Ministry of Finance (FMFN) is located in Abuja, the capital city of Nigeria. The Ministry was first established in 1958 to replace the Finance Department. It is responsible for managing and controlling Nigeria's public finance (Federal Government of Nigeria, 2017) The Ministry has offices in all the 36 composite states of Nigeria. The FMFN performs the following duties:

- a) Preparing annual estimates of revenue and expenditures;
- b) formulating policies on fiscal and monetary matters;
- c) mobilizing domestic and external financial resources;
- d) maintaining adequate foreign exchange reserves;
- e) maintaining the internal and external value and stability of the Nigerian currency;
- f) supervising the insurance industry;
- g) managing public revenue allocation matters and
- h) relating with relevant international organizations and financial institutions (reference).

The ministry also coordinates activities of parastatals and agencies such as:

- a) **Office of the Accountant General of the Federation of Nigeria:** is responsible for making payments and receipts of the nation, accountable for the proper management of accounts in all existing department in the FMFN, and also to supervise receipts of public revenue and expenditure of the Nation.
- b) **Budget Office of the Federation:** this department under the FMFN is responsible for formulating the budget of the Nation. In addition, the department is responsible for budget monitoring and evaluation, fiscal, expenditure and the revenue of the nation at large.
- c) **Federal Inland Revenue Service (FIRS):** The FIRS under the FMFN is responsible for assessing, collecting and making account tax, revenue accrued to the Federal Government of Nigeria.

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- d) **Investment and Security Tribunal (ISA):** The ISA is an independent specialized judicial body. The primary responsibility and function of the ISA is to adjudicate on disputes and controversies in capital market transactions, security and pension's law operations.
- e) **National Insurance Commission (NIC):** The NIC is a statutory agency which is established to regulate and supervise the Nigerian Insurance Sector in the country.
- f) **Nigeria Deposit Insurance Corporation (NDIC):** The NDIC is a statutory agency under the Nigerian Government was established to regulate and supervise the Nigerian Insurance Sector.
- g) **The Department Management Office (DMO):** The DMO is primarily responsible for coordinating the Management of Nigeria's department and to supervise the Nation's bond market.
- h) **Federal Mortgage Bank of Nigeria (FMBN):** The FMBN is a Nigerian Service Centre which is responsible for housing loan schemes and house financing services (PEBEC, 2018).

The Ministry has nine departments and nine units. Each of the departments and units is headed by a Director. The departments carry out duties and activities relating to the mission and vision of the Ministry. The departments are:

- 1) **Economic Research and Policy Management:** This department is responsible for the economic research and policy management of the Nation.
- 2) **Finance and Account:** The department is responsible for the accounting, controlling, planning and organising the ministries' finances.
- 3) **Home Finance:** The department is responsible for analysing management and collating of financial records in the ministry.
- 4) **Human Resource Management:** This department is responsible for staff recruitment, planning and coordinating the administrative functions of staff in the Ministry.
- 5) **International Economic Relations:** This department is responsible for planning and implementation of international relations strategies for the nation with other foreign countries. The department also collaborates activities and events with the private, public sectors and internationally.
- 6) **Graduate Internship Scheme:** The Graduate Internship Scheme is responsible for job placement of graduates and providing skills training in various fields to enable them compete in the global market.
- 7) **Technical Services:** The Technical Services Department within the Federal Ministry of Finance Nigeria is responsible for the maintenance and technological upgrades of equipment, machines, security equipment, electronic systems, communication system and other ICT related issues.
- 8) **Reform Coordination and Services:** This Department is responsible for the implementation of civil services reforms within the Ministry and other agencies and parastatals in the country.
- 9) **General Services:** This Department is responsible for the provision of supplies, maintenance and operations budget, purchase of equipment and materials for the Ministry.

The units under the Federal Ministry of Finance are:

- a) **Anti-Corruption:** The Anti-Corruption Unit in the FMF is responsible for creating awareness and support for the public against corruption, creating anti – corruption prevention mechanism and monitoring schemes between the Nigerian public, media and Anti – Corruption agencies established by the Federal Government.
- b) **Information and Communication Technology (ICT) Unit:** The Information and Communication Technology Unit in the FMFN is responsible for ICT related matters and activities in the Ministry, departments and units.
- c) **Legal Unit:** The Legal Unit of the Federal Ministry of Finance Nigeria renders legal assistance to all departments and units in the Ministry and its parastatals and agencies.
- d) **Press and Protocol:** The Press and Protocol Unit is responsible for processing, coordinating and facilitating official related matters between Nigeria and other Nations.

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- e) **Procurement Division:** The Procurement Unit is responsible for the management and procurement of goods and services for the Government. The Unit is also responsible for purchasing, stock control and management.
- f) **Servicom Unit:** The Servicom Unit is responsible for delivery of Government services in efficient and effective manner so as to effectively implement government policies in all ministries and agencies.
- g) **Stock verification Unit:** The Stock Verification Unit is responsible for ensuring that there is no government stores wastage, discrepancies, deterioration, dormancy and excesses in the Ministry.
- h) **The Information and Communication Technology:** (ICT) Unit is responsible for all ICT-related activities of the Ministry. Its major functions include:
 - Provision of sustainable enterprise-wide information system that will enhance easy and cheap access to information.
 - Providing maintenance services ICT related infrastructure of the Ministry.
 - Providing blueprint for re-engineering and transformation of information in FMFN into automated functional systems
 - Developing in-house capacity to manage ICT resources in the Ministry.
 - Maintaining and updating the Ministry's Website and providing unhindered connectivity to global network
 - Maintaining FMFN database
 - Coordinating Government Integrated Financial and Economic Management Information System(GFEMIS)
 - Supporting otherservice-wideprojectsthatshareinformationwiththeMinistry
 - Offering technical support to Departments and individual user
 - Advising the management at all levels on the need for constant update of ICT infrastructure
 - Supervising the implementation of ICT in FMFN
 - Representing the ministry on all ICT related Fora.
- i) **The Records Management Unit:** The basic functions of the Records Management Unit (RMU) are to ensure that all administrative records are managed, preserved and are well secured. Specifically, the Unit is responsible for:
 - Records management retrieval and accessibility
 - Providing guidance on management activities
 - Records appraisal and scheduling
 - Preservation and
 - Restoration activities

1.2 Objectives of the study

The general purpose of the study was to investigate the benefits and issues in implementation and maintaining e-records at the FMFN.

The specific objectives of the study were:

- a. To identify the benefits of implementing and maintaining e-records at the FMFN;
- b. To find out the challenges experienced in implementing and maintaining e-records at the FMFN;
- c. To make recommendations that will addresses the challenges hindering effective implementation and maintenance of e-records at the FMFN.

2. Literature review

2.1 Benefits of Implementing E-Records

The context of this literature review categorises benefits as either tangible or intangible. The former refers to those benefits that can be quantified and are largely expressed in terms of measurable improvements or savings in cost;

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while the latter refers to non-quantifiable improvements to an institute. Generally, tangible benefits are conveyed in monetary terms. However, they can also be quantified in other terms such as achievement of a twenty percent reduction in carbon emissions from abridged electronic storage. Intangible benefits examples include increased legal compliance and improvements in the standards of corporate governance.

An e-records generally improves the quality and efficiency of an organization's overall information. Hamid, Asma'Mokhtar, Yusof and Warland (2020) undertook a study to review the benefits of an e-records system. Findings from the review showed that e-records generates quantitative benefits such as cost savings, increased productivity among informational employees, and reduction in data duplication, and improved efficiency in information retrieval. Carayon, Wetterneck, Cartmill, Blosky, Brown, Hoonakker & Wood (2020)) notes that besides enhancing the sharing of documents across different departments in an organization, the e-records helps in curbing duplication.

Similarly, a study by the National Archives of Australia focused on the key issues regarding applications and managing of e-records by the Australian Government. The study results suggested that an ERMS can enhance business efficiency, lower business risks and provide greater accountability via improvement of how digital information is managed. In addition, e-records aids in compliance with crucial government requirements by ensuring records are secured, managed appropriately and are accessible over time.

Binwei (2014) conducted a case study for a New Zealand public sector organisation on the issues and benefits in e-records Implementation. The study used interview questions and semi-structured interviews to collect information from e-records administrators and key users of affected departments. Among the benefits highlighted in the study findings include improvement in the overall quality and efficiency of information, and enhancement in the retention of the organization's knowledge base.

Haider, Aryati and Mahadi (2015) also undertook a study on the opportunities and challenges in implementing EDMS in Malaysia. Findings revealed that EDMS helps in the management of information; provision of accurate and timely information at the lowest cost possible. The study argued that EDMS saves both time and cost via increasing the speed of retrieving records and eliminating the need to have an extra content infrastructure.

2.2. Issues in Implementing E-Records

The study by the National Archives of Australia also focused on identifying the challenges experienced during applications and managing of ERMS in the Australian Government. From the findings, various issues were identified as follows. First, an ERMS entails resource commitment since it is a major project. It requires a substantial commitment of money, time and staff. For instance, the staffs require appropriate training to be able to use the system efficiently. Second, an ERMS requires security not only for the system itself but also for the information contained within. Third, the system requires configuration to suit the organization's specific needs and end users.

In their e-records case study on DARWIN, Di Biagio and Ibiricu (2008) identified lack of management support as a major challenge towards an e-records implementation. They noted that change in the management process and direct involvement of management is key to successful implementation of the system. Kwatsha (2010) did a study on factors affecting the implementation of an electronic document and records management system in South Africa. The methodology adopted for the study involved use of literature research as the main method for data collection. Semi –structured interviews were also done with government institutions. The study results showed that those factors that have been critical in the implementation of ERMS in South African organisations were strategic, technical and social in nature. Furthermore, results showed similarity in the factors affecting ERMS implementation within various government institutions.

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Asogwa (2012) conducted a cross country study on the challenges of managing e-records in Sub-Saharan Africa. The study findings revealed the major challenges in the management of e-records in Africa to be technically induced and administrative. Other challenges were lack of appropriate infrastructure, poor regulatory frameworks and workable legislations, incompetent ICT personnel and inadequate finance.

In the Botswana context, Mosweu, Bwalya and Mutshewa (2016) carried out a study investigating the factors influencing the adoption and usage of electronic documents and ERM at the Ministry of Trade and Industry. The study used a modified Unified Theory of Acceptance and Use of Technology (UTAUT) and a survey as the research design. They administered questionnaires to about sixty Action Officers who constituted the key users of the system. The study findings identified four key factors contributing to low adoption and usage of ERMS: technophobia, perceived system complexity, negative attitudes to system use, and incompatibility with existing information systems.

Studies on e-records and ERMS in the context of Nigerian federal ministries are very limited. The majority of the existing studies on this subject focus on the medical e-records while others focus on the broad subject of 'records' but not e-records. For instance, a study by Unegbu and Adenike (2010) focused on identifying the challenges of records management practices (administering public record generation and disposal services) at the Ministry of Information and Strategy. Using questionnaires and a sample of 37 respondents (employees), the data was analysed using the SSPS analytical package. Study findings showed that effective implementation of ERM enhances the performance of an organization, and that proper management of records leads to easy and quick decision making in the ministry.

3. Methodology

The study was carried out at the FMFN. The use of e-records is at the stage of implementation and its gaining a pace. However, a combination of both quantitative and qualitative approach was used in this study and both approaches was used to complement one another. The target population comprised of the FMFN staff using the e-records. For the study, all the FMFN departments that have implemented e-records represented the target population. A total of 60 questionnaires were administered. Purposive sampling techniques was used to select from each of the FMFN departments and units; (Economic Research and Policy Management, Finance and Account, Home Finance, Human Resource Management, International Economic, Technical Service, Reform Coordination and Services, General Service, Anti-Corruption, Internal Audit, SERVICOM and ICT) This is because it was believed that all selected staff have the technical skills in the area of e-records management to enable them respond to the research questions. Respondents were randomly selected based on consideration of accessibility, financial and time constraint. Data was collected from the FMFN staff through both survey questionnaire and semi structure-interview, the questionnaire was self-administered by the researcher and instructions on how to respond to the item were explained to the respondents. Both open ended and closed ended questions were used to capture all the information required. Out of the 60 questionnaires distributed, 51 were filled and returned, achieving a response rate of 85%. In addition, interview was targeted to be conducted immediately after gathering the filled questionnaires in each of the departments, out of the 51 respondents, 37 agreed to be interviewed, giving 72.5% response rate.

4. Result and Discussion

The findings and discussion of results are presented in line with the study objectives stated above. Furthermore, presentation and discussion of results were based on both the questionnaire and interview results.

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Table 1: Distributions of Questionnaire and Interviewed FMFN Staff Based on Departments and Units

S/N	Departments	Questionnaire		Interview	
		Frequency	Percentage	Frequency	Percentage
1.	Economic Research and Policy Management	5	9.8	4	10.8
2.	Finance and Account	4	7.8	4	10.8
3.	Home Finance	4	7.8	2	5.4
4.	Human Resource Management	3	5.8	2	5.4
5.	International Economic	4	7.8	4	10.8
6.	Technical Service	4	7.8	2	5.4
7.	Reform Coordination and Services	5	9.8	2	5.4
8.	General Service	4	7.8	3	8.1
9.	Anti-Corruption	5	9.8	4	10.8
10.	Internal Audit	3	5.8	3	8.1
11.	SERVICOM	5	9.8	3	8.1
12.	ICT	5	9.8	4	10.8
13.	Total	51	100.0	37	100.0

The distribution of the FMFN staff according to the department shows that: 49% of them were from Economic Research and Policy Management, Reform Coordination and Services, Anti-Corruption, SERVICOM and ICT, 39% were from Finance and account, Home Finance, Human Resource Management, International Economic and General service department, 11.6% were from Technical Service and Internal Audit. The Table also shows that the largest participants in the interviewed session were from Economic Research and Policy Management Department, Finance and account Department, Human Resource Management Department, Anti-corruption and ICT Department giving a total of 54%, 24.3% were from General Service Department, Internal Audit Department and SERVICOM, 21 % were from Home Finance Department, Technical Service Department, International Economic and Reform Coordination and Service Department.

Objective 1: The Benefits of Implementing E-Records at the FMFN.

Researcher use the response of eight (8) items that measures the benefits of implementing e-records. The result is shown in the Table 2.

Table 2: Benefits of Implementing E-Records

S/N	Benefits of Implementing ERMS	SA	A	D	SD
1.	Cost Saving	47 (92.1)	2 (3.9)	2 (3.9)	0 (0.0)
2.	Time Saving	26 (50.9)	20 (39.2)	3 (5.8)	2 (3.9)
3.	Increase Productivity	14 (27.4)	30 (58.8)	5 (9.8)	2 (3.9)
4.	Reduce Data Duplication Error	49 (96.0)	2 (3.9)	0 (0.0)	0 (0.0)
5.	Enhanced Easy Information Retrieval	41 (80.3)	3 (5.8)	5 (9.8)	2 (3.9)
6.	Location of Information	32 (62.7)	14 (27.4)	3 (5.8)	2 (3.1)
7.	Maximum Security of Records	43 (84.3)	5 (9.8)	3 (5.8)	0 (0.0)
8.	Reduce Storage Space	43 (84.)	5 (9.8)	0 (0.0)	3 (5.8)

Note: Strongly Agree/Agree were collapsed to “Strongly Agree” while Disagree/Strongly Disagree were collapsed to Strongly “Disagree”. Table 2 shows that 96.0% of the respondents Strongly Agree that implementing and maintaining e-records is cost saving while 3.9% disagree. The findings also show that 90.1% of the respondents strongly agreed that implementation of e-records would save time wastage while 9.8% disagreed. However, 86.2% of the respondents strongly agreed that the implementation and maintenance of e-records will

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increase maximum productivity while 13.7% disagreed. The findings further showed that 100% of the respondents strongly agreed that implementation of e-records will greatly reduce data duplication error. However, the finding of the study showed that 86.2% of the respondents strongly agreed that the implementation of e-records aided easier information retrieval while 13.7% of the respondents disagreed. Furthermore, 90.1% of the respondents strongly agreed that the implementation of e-records enhance and encourage easier location of information while 9.8% of the respondents disagreed. The result additionally showed that 94.1 % of the respondents strongly agreed that implementation of e-records ensure maximum security of records while 5.8% of the respondents strongly disagreed with the statement. Besides the benefits of the implementation of e-records includes improvements in facilitating quick response to solve organisational problem and also improve increased productivity at the FMFN.

4.1 Result from the Interview

Table 1 shows the distribution of respondents by departments. The interview questions were formed based on the first objectives of the study. The first objective of the study sought to identify the benefits of e-records. The findings from the study revealed various benefits of e-records across the various departments at FMFN. These are discussed under the various headings below.

The interview question: What are the benefits of implementing e-records at the FMFN?

- a) **Facilitated work task / reduced workload:** Some of the respondents indicated that, the introduction of the e-records has made their work easier and gauged some of these reasons; highly satisfied 54%, moderately satisfied 24.3%, satisfied 21.6%. One respondent opined, “it has reduced the manual documentation of information which was tedious and time consuming to do.” Another one noted, “it has made it easy to locate various folders and would reduce working time if implemented properly” The general message from the interviews was that e-records have made documentation easier and faster and enhanced easy tracking of various folders in the different departments in the FMFN.
- b) **Reduced errors:** Some respondents indicated that the introduction of the system has reduced the errors made in the paper records. Majority of the respondents noted, “the system has reduced errors and redundancy in patient information”. A respondent from the ICT department also mentioned that the introduction of e-records has made it easy to retrieve information, which was not possible with paper records and cited an example as; “a visitor registration file was reported missing by the receptionist, so we just asked for the visitation period and typed the dates, then we searched for the details and obtained all the records of the visitors during that period” Another officer from the technical service department argued that e-records have led to smooth working with about 90 percent reduction in loss of folders and also easy retrieval of information.
- c) **Other benefits of the system:** Some respondents indicated that e-records have help improved the storage of departmental folders and reduced the storage space due to the less usage of paper records and folders. Other respondent also indicated that the ministry has benefited from not printing paper records and believe it has save the ministry some money. Another respondent indicates that information is easily traced within the system thus contributing to the further reduction of costs.

The findings summarily indicated that introduction of e-records have reduced the amount spent on procuring stationeries for the maintenance of the paper-based records. Some respondent mentioned that, “there has been a decrease in the amount incurred on the double issue of folders as this has been replaced by e-records”. During the interviews, a senior officer from the General Service department noted that “e-records have resulted in reduced procurement of items such as papers, folders, clips, books, drawers and staplers.”

Objective 2: Challenges of E-Records Implementation and Maintenance

To achieve this objective, respondents were asked to list the challenges they usually face when implementing and maintaining e-records. The challenges indicated by respondents were summarised into five broad categories and were analysed based on the Friedman Test. The results are shown in the Table 3.

Table 3: Challenges of Using E-Records

S/N	Challenges of Implementing E-Records	No	Frequency	Percentage
1.	Constant power Disruption	51	46	90.1
2.	Poor Internet Connectivity	51	37	72.5
3.	Inadequate Skilled Personnel	51	34	66.6
4.	Lack of Technological Know-How	51	29	56.8
5.	Increased Workload	51	30	58.8

The result indicated that constant power disruption was one of the most common problem facing the implementation and maintenance of e-records at the FMFN with the percentage of 90.1%. This is followed by the poor internet connectivity which was selected by 37 respondents with a percentage of 72.5%. Another challenge is Inadequate skilled personnel selected by 34 respondents with 66.6%. The other problems identified included; lack of technological know-how indicated by 29 respondents with the percentage of 56.8% and increased workload indicated by 30 respondents with the percentage of 58.8%. This result suggested that all challenges are significant and needs to be addressed. Other challenges that were identified by the respondents were; insufficient computers, inadequate training, unwillingness of the IT staff to help and lastly virus problem,

4.2 Result from the Interview

The second objective of the study addresses the challenges experienced in implementing and maintaining e-records at the FMFN. However, various challenges were identified from the findings of the study, these include; poor network connections, unstable power supply, increase workload, inadequate training, insufficient computer system, inadequate skilled personnel.

The interview question: What are the problems you have encountered in implementing and maintaining e-records at the FMFN?

- a) **Poor internet connections:** A respondent emphasis that, there are often breaks in the network connections of the computer system, which makes working with the system difficult. Another respondent mentioned, “most times the internet connection cease to work and there is often breaks in the connections especially when there is rain or sometimes when the cables come into contact with water which makes it impossible for me to prepare e-records”. In such situations the users are forced to document the proceeds in a paper and transfer it to the system when the connection is restored. This according to the respondent is a workload for them, which has resulted in a lot of backlog data to be entered into the system.
- b) **Unstable power supply:** Most respondents identified unstable power supply as one of the challenges facing the e-record system. It was mentioned by a respondent that even though the ministry has a secondary power source, not all the units were connected to the source. This indicates that the secondary power source is not sufficient and efficient for the entire departments and units in the ministry. Furthermore, according to some respondents, incessant power outages interrupt the maintenance and implementation of e-records as the sustainability of the e-record system rely greatly on electricity. Therefore, when there is erratic power supply, the e-record system suffers too.
- c) **Increased workload:** Some respondents identified e-records to have increased their workload since double entries are made both in their record books and on the system. A respondent noted, “it is time consuming compared to the use of books and folders. We have to key in all information into the computer after you are done with the paper work.”

- d) **Inadequate training:** During the interview session, a respondent mentioned that one of the challenges realised from the implementation and maintenance of e-records is the lack of technical knowhow on handling e-records. Findings from the interview also affirmed this claim. Majority of the respondents pointed to having struggled to create a folder to store their information and also retrieve it. One senior staff stated that inadequacy of training is being provided to the staff. He further stated that; “we did not deliver an efficient training to the data entry personnel and this is as a result of time factor that is attached to the condition of the implementation. Something also happened when some personnel are trying to enter data into the computer system and they called my attention that they were having some difficulties in processing some of this data” Did we suddenly realise that we had to do this entry and why is majority of you calling my attention? Some users were not entering the procedure properly, that is why I said I think the training was not effectively delivered”.
- e) **Insufficient computers:** Respondents also mentioned insufficient computers as a major challenge in the implementation and maintenance of e-records at the FMFN. One respondent noted that sometimes they are forced to retrieve information from other departments due to lack of computers in their departments.
- f) **Inadequate skilled personnel:** In some of the interviews conducted some respondents mentioned that due to the overall shortage in skilled personnel, it was difficult to decide on who should make entries in the ERMS. Hence management was compelled to identify and create a separate unit with personnel who had adequate knowledge in computing to enter the information in the patients’ folder into the system. “There was a problem with the personnel. The nature of the system necessitated its usage by officers to input their work proceedings in the system; however, they were excluded from the system usage due to some resistance received from them”

Summarily, findings from the study indicated that majority of the respondents identified inadequate computers and training as the major challenge with the system as identified in the interview.

Objective 3: Recommendations suggested to the Problems of Implementing E-Records

In order to achieve this objective, respondents were asked to identify and itemised possible solutions to the problems they usually face when implementing and maintaining e-records at FMFN. The suggested solution by the respondents were summarised into four main categories and were analysed based on the Friedman Test. The results are shown in the Table 4.

Table 4: Recommendations on the Problems of Implementing E-Records

S/N	Recommendations on E-Records	No	Frequency	Percentage
1.	Provision of Computers and other IT Infrastructure	51	50	98.0
2.	Provision of Steady and other Alternative Power Supply	51	48	94.1
3.	Provision of Adequate Skilled Manpower	51	42	82.3
4.	Provision of training and workshop programs	51	34	66.6

The result indicated that provision of computers and other IT infrastructure was the most common recommendation suggest by the FMFN staff with a frequency of 50 and percentage of 98.0%. This is followed by provision of steady and other alternative power supply which was suggested by 48 respondents with the percentage of 94.1%. Another suggested recommendation was the provision of adequate skilled manpower which was suggested by 42 respondents with the percentage of 82.3%. Other suggested solution included provision of training and workshop programs, this is indicated by 34 respondents with the percentage of 66.6 respondents. However, this result suggested that all the recommendation to problems of implementing e-records are significant to the sustainability of any organisation and they are highly required to be implemented.

4.3 Result from the Interview

The third objective of the study sought to identify the recommendations on e-records management system. The findings from the study revealed various recommendations given by respondents towards the implementation and maintenance of e-records across the various departments at FMFN. These are discussed under the various headings below.

The Interview Question: What solution would you proffer to the problems above?

- a) **Provision of training/workshops:** During the interview session, a respondent mentioned that one of the major recommendations realised from the challenges of implementation of e-records is the initiation of training and workshops programs to train the personnel on the use of e-records to manage records. Findings from the responses indicated majority of the respondents affirmed that training personnel will have positive impact on the management of e-records and also improve the skills of accessing, store and retrieving records from the computer systems. “A senior staff stated that adequacy of the training should be provided to all the FMFN staff; “effective training should be given to the personnel because something happened when a staff is trying to enter information on the system and he called me to assist him in the modification of some entries in the ERMS. Some staff were not entering the procedure of the data properly into the ERMS, that is the more reasons it is necessary to train the staff consecutively in order to be able to dodge errors and reducing duplication of data in the system”.
- b) **Provision of sustainable internet connections:** Some of the respondents indicated that, there should be a sustainable internet connection in the organization; this will makes working flow to be smooth such as sharing of information and communication. “Some respondent mentioned, “The computer system should always be connected to the internet in order to exploits its full use. “Staff will be motivated if there is disruption in internet connections especially when the systems are in it full use to prepare e-records” noted by a respondent. With these, users will be encouraged to the continuous usage computer system to prepare e-records.
- c) **Provision of IT infrastructure:** Majority of the respondents submitted that computer systems and other IT infrastructure must be provided to support the implementation and maintenance of e-records at the FMFN. Few respondents also submitted that most times, they are compelled to retrieve information from other departments/units due to lack of working computer systems in their departments, therefore the FMFN should encourage the implementation e-records by providing adequate ICT infrastructures to all departments and units.
- d) **Provision of sustainable power supply:** majority of the respondents indicated that there should be a provision of stable power supply or alternative power supply at the FMFN such as Solar power or power generating set. It was also mentioned by a respondent that the FMFN has a secondary power supply but this must be adequately connected to all the units. Another respondent noted that “The e-records will be maximally implemented when there is a stable power supply. According to the responses from the interviews, few respondents indicated that processing of e-records will not be interrupted if alternative power supply is adequately consistently integrated in the system as the success of ERMS rely greatly on constant availability of electric power supply.
- e) **Provision of adequate skilled manpower:** Few respondents indicated that the FMFN should provide and deploy more skilful personnel to those units that is required. However, the management should be encouraged to create a separate unit with personnel who had adequate knowledge in computing to enter the information in the patients’ folder into the system. Summarily, findings from the study indicated that majority of the respondents indicated that there should be adequate skilled manpower to manage the e-records.

5. Discussion of Findings

Respondents indicated that they encountered problems when using e-records at the FMFN. Both the questionnaire and the interview result suggested that the most common challenges is constant power disruption. This is followed by poor internet connectivity. Besides the problem of sharing information from one department/unit to another is a major problem. Inadequate skilled manpower is not unconnected with the major problems that is facing e-records. Lack of technological know-how and increased workload are the challenges they identified. Having identified the benefits of the implementation and maintenance of e-records in the findings of the study such as time saving, increase productivity, reduction of data duplication, security and safety of records and cost saving, Mukred, Yusof, Alotaibi, Asma'Mokhtar and Fauzi (2019) identified lack of technological know-how as the major challenges facing e-records users in their study. Besides, Rieh (2016) opined that inadequate skilled manpower, constant power disruption, poor internet connectivity are parts of the major problems of implementing e-records.

Similarly, Kamatula and Kemoni (2018) conducted a study on e-records in support of e-government implementation in the Tanzanian public service. the study findings revealed that, despite the availability and use of various types of e- records within the public offices, the management of e-records is not yet streamlined to the registries. As such, records personnel were not directly involved with the management of e-records, rather office secretaries and IT staff were. Because of that, the management of e-records generated by government departments as a result of e-transactions and website records was not well managed during their continuum. The study further established that records personnel, action officers and IT staff were not conversant with procedures and practices of e-records management and had inadequate knowledge and skills pertaining to e-records and its related systems, including procedures for e-records storage, distribution and disposition.

Based on the findings of this study under objective two, it would mean that the FMFN efforts on the implementation and maintenance e-records would be useless if the half- cooked records personnel are not given practical training on use ERMS to maintain e-records. Additionally, it's evident from the findings that top management at the FMFN buy-in agenda on e-records seems to be lacking. It would also seem from the results that most FMFN staff, including SERVICOM and ICT officers, are not conversant with procedures and practices of e-records management. This suggests that the effective implementation and maintenance of e-records will not be successful unless all stakeholders are acquainted with the technological know-how. In order to achieve this, training is important, along with policies and procedures that would provide responsibilities and directives to all responsible FMFN staff on the management of e-records.

4. Conclusions and Recommendations

The study was carried out at the FMFN, with the sole aim of appraising the benefits and issues in implementing and maintaining e-records. The outcome of the evaluation has produced useful insight regarding the benefits and issues encountered in the process of implementing and maintaining e-records. In general term, the study revealed a fair positive implementation and maintenance of e-records at the FMFN. This conclusion is predicated on the fairly tangible benefits the system is currently yielding. The implementation and maintenance of e-records at the FMFN has far resulted in the improvement of keeping records. It has also helped in reducing the expenditure of the ministry which resulted from wrong entry of data. The e-record system has also been perceived to have reduced errors, work load and storage space. Besides, the study also discovered some challenges which work against the functioning and thriving of e-records. A factor which can easily be identified is the power situation in the country which makes it difficult for the e-records system to operate at optimal capacity. Infrastructural deficits were also recalled as a challenge to the operationalization of the e-records. Poor internet connections and inadequate training of the personnel were also identified in the study as a challenge to e-records implementation and maintenance.

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The study recommends that the FMFN should develop policies and procedures not only for paper based records alone but also e-records as well. Since many organizations especially non-governmental organization, governments ministries and departments largely operated in paper based environment for a very long time, the change process from paper to e-records continues to pose a lot of threats (International Records Management Trust, 2004). Therefore, the FMFN need to rigorously devise a measure to facilitate the implementation and sustainability of e-records into the working practice of the workers in all departments and units and there should be a big attempt to introduce regular training workshops, additional investment into the IT equipment and boosting of internet connectivity in order to keep workers in-tune with the transformation the e-records system has brought. Chigariro and Khumalo (2018) observed that efforts have been undertaken, in the ESARBICA region but no clear and systematic strategies have been implemented in the management of electronic records. Despite efforts put in place, ministries, agencies and departments should ensure an ideal mechanism that will foster the effectiveness and efficiency of e-records.

REFERENCES

- Abdul Hamid, N. F. (2018). Implementation of Electronic Record Management System (ERMS): An Organizational Readiness (masters' thesis). Mara University of Technology, Shah Alam. Retrieved from: https://www.researchgate.net/publication/322519324_Organization's_Readiness_Towards_Impementation_of_Electronic_Records_Management_System_A_Case_Study
- Abdulkadhim, H., Bahari, M., Bakri, A., & Hashim, H. (2015). Exploring the common factors influencing Electronic Document Management Systems (EDMS) implementation in Government. *ARPJ Journal of Engineering and Applied Sciences*, 10(23), 17945-17952.
- Ajibola, R. E., Olatunji, O. S., & Oduroye, P. (2020). Improving Records Management and Security For Successful Business Performance: The Role Of New Media. *Library Philosophy and Practice*, 0_1-19.
- Anderson, D. (2019). Knowledge Management (KM) Requires Records Management: The Role of Retention Schedules in Businesses with KM Programs.
- Asogwa, B. E. (2012). The challenge of managing electronic records in developing countries: Implications for record managers in Sub Saharan Africa. *Record Management Journal*, 22(3): 198-211.
- Bantin, P.C. (2001). The Indiana University electronic records project: lessons learned. *Information Management Journal*, 35(1):16-24.
- Binwei, Y. (2014). *An analysis of the issues and benefits in ERMS Implementation- A case study in a NZ public sector organisation*. Retrieved from: <http://researcharchive.vuw.ac.nz/xmlui/bitstream/handle/10063/3723/thesis.pdf?sequence=2>
- Carayon, P., Wetterneck, T. B., Cartmill, R., Blosky, M. A., Brown, R., Hoonakker, P., & Wood, K. E. (2020). Medication safety in two intensive care units of a community teaching hospital after electronic health record implementation: sociotechnical and human factors engineering considerations. *Journal of patient safety*.
- Chigariro, D., & Khumalo, N. B. (2018). Electronic records management research in ESARBICA: a bibliometric study. *Records Management Journal*.
- Di Biagio, M. L. & Ibiricu, B. (2008). A Balancing Act: Learning Lessons and Adapting Approaches Whilst Rolling Out an ERMS. *Records Management Journal*, 18(3), 170-179.
- E. UN. (2012). Government Survey (2012): *E-Government for the people*. Department conomic and Social Affairs, United Nations, New York.
- Haider A. A., Aryati B. and Mahadi B. (2015). Opportunities and Challenges in Implementing Electronic Document Management Systems. *Asian Journal of Applied Science*, 3(1): 36. - provide the page nos. for this article



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- Hamid, R. H. A., Asma'Mokhtar, U., Yusof, M. M., & Warland, A. (2020). Electronic Records Management in Schools: The Case Study of School Examination Analysis System. *Jurnal Pengurusan (UKM Journal of Management)*, 57.
- Kamatula, G., & Kemoni, H. (2018). A framework for e-records in support of e-government implementation in the Tanzanian public service. *ESARBICA Journal: Journal of the Eastern and Southern Africa Regional Branch of the International Council on Archives*, 37, 69-88.
- Kwatsha, N. (2010). Factors affecting the implementation of an electronic document and records management system (masters' thesis). University of Stellenbosch, Bellville, South Africa. Retrieved from: file:///C:/Users/jmbithi/Downloads/kwatsha_factors_2010.pdf
- Mosweu, O., Bwalya, K., & Mutshewa, A. (2016). Examining factors affecting the adoption and usage of Document Workflow Management System (DWMS) using the UTAUT model. *Records Management Journal*.
- Mosweu, T., & Mosweu, O. (2019). Electronic court records management systems: a review of literature in selected African countries. *Mousaion*, 36(4), 1-21.
- Mukred, M., Yusof, Z. M., Alotaibi, F. M., Asma'Mokhtar, U., & Fauzi, F. (2019). The key factors in adopting an electronic records management system (ERMS) in the educational sector: A UTAUT-based framework. *IEEE Access*, 7, 35963-35980.
- National Achieves of Australia. (2011). *Implementing an ERMS: Key considerations*. Retrieved from: http://www.naa.gov.au/Images/ERMS-key-considerations_tcm16-88772.pdf
- Nengomasha, (2009). *A study of electronic records management in the Namibian public service in the context of e-government*, PhD thesis, University of Namibia.
- Rieh, H. Y. (2016). Records professionals' challenges and barriers in public institutions in Korea. *Government Information Quarterly*, 33(4), 638-646.
- Unegbu., E. & Adenike, B. (2010). *Information Resources Management*. Department Babcock University, PMB 21244, Ikeja, Lagos Nigeria.
- United Nations (2014). *United Nations E-Government Survey 2014*. Retrieved from: https://publicadministration.un.org/egovkb/portals/egovkb/documents/un/2014-survey/e-gov_complete_survey-2014.pdf on 8th July, 2017.