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Digital records management practices in the public sector in Manicaland Province of Zimbabwe

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Abstract

The paper assesses the digital records management practices in government ministries in Manicaland province. The study employed a qualitative and interpretive multiple case study research design in the assessment of digital records management practices in the ministries. The study established that most of the digital records management practices in government ministries in Manicaland province do not meet the measure of best practice as envisaged by several international records management standards, particularly the generic standard ISO 15489-1 2016. The lack of clear provisions for digital records in the NAZ Act, absence of policies for digital records and failure to implement international records management standards for digital records, as recommended by NAZ, is having a negative influence on the management of digital records in government ministries in Manicaland province. The performance of digital records management processes such as records creation and capture, classification, access and security control, storage, preservation, and digital records disposal is not adhering to international standards for digital records management. It was further revealed that personnel managing digital records lack the critical competencies required for digital records management work. The study recommended the review of the NAZ Act to include specific provisions for digital records, formulation of digital records management policies and the implementation of standards recommended by NAZ, improvement of records officers' competences through short courses on digital records management and adherence to international standards for records management in the performance of digital records management processes.

Keywords: digital records management, international standards, government ministries, Manicaland Province

Introduction and background to the study

The fourth industrial revolution, which is currently underway around the world, fundamentally transformed the way society does business. It brought the digital revolution, which disrupted many business practices. According to Iqbal and Yadaw (2021:86), the fourth industrial revolution led to the adoption of digital technologies (or ICTs) in business organisations around the world. The advances in the use of ICTs eventually saw the transition from manual to electronic business systems in both the public and private sector. Consequently, most business operations have been automated as organisations, both public and private, implement various electronic business systems. As a result, there has been an

exponential rise in the volume and type of digital records generated in both the public and private sectors.
It is in this context that the Government of Zimbabwe adopted several e-government initiatives. These include, the deregulation of the telecommunication sector in 2002 thereby opening the sector to more players, the formulation and the launching of a National ICT Policy in 2007 (National ICT Policy, 2016) reviewed in 2015, the establishment of a standalone Ministry of Information and Communication Technology in 2009 to spearhead ICTs development in the country, the crafting of the E-government framework called Zim-Connect 2011-2015 which sought to totally connect government (Zinyama and Nhema, 2016). Other ICT initiatives included the temporary removal of duty on ICT hardware and software (National ICT Policy, 2016), the connection of Zimbabwe to the submarine optical fibre system leading to the rise in internet penetration from 1.3 percent in 2008 to 62.6 percent in 2021 (Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ), (2021). These initiatives, among others, created a conducive environment for the automation of government business operations.

The e-government initiatives indicated above, among others, led to the automation of several government operations. For instance, the automation of government financial accounting through the Public Finance Management System, automation of civil service payroll, automation of the issuing of national identity documents through the National Registration System in 2012 and the processing of pensions (Munkuli, 2015:44). These automation initiatives together with other ministry specific systems led to the generation of large volumes of digital records in the public sector of Zimbabwe. The study by Mutsagondo (2017) on electronic records management in the public sector in Midlands's province of Zimbabwe confirmed this reality.

It is also in this context that government ministries in Manicaland province adopted the use of computers, electronic mail, business systems such as Public Finance Management System, thus, leading to the boom in the generation of digital records in government ministries. The emergence of digital records in the public sector has given government ministries the obligation to establish and maintain proper digital records management systems to ensure that digital records continue to provide authentic evidence of business operations in these ministries. In the context of this study, proper digital records management is viewed as one which conform to international standards for records management particularly those relating to digital records. The study, therefore, sought to assess digital records management practices in the public sector of Manicaland province in Zimbabwe with a view to recommend ways of improving the current practices. The public sector of Zimbabwe comprises three components namely government ministries and departments, local authorities, and parastatals. The provision of public services in Zimbabwe is largely achieved through these three subsets. The public sector at provincial level also mirrors this national structure. The current study, however, focused on government ministries in Manicaland province of Zimbabwe and preliminary research revealed that 15 ministries have managed to decentralize to provincial level. The study targeted these ministries.

Statement of the problem

The advent of Information and Communication Technologies (ICTs) has necessitated the adoption of e-government by governments across the world. The government of Zimbabwe, which includes the public sector of Manicaland province, also adopted ICTs to transform the provision of public services (Munkuli, 2015). The proliferation of ICTs in the public sector of Zimbabwe led to the generation of large volumes of digital records in government ministries

(Magama 2018; Chikomba 2019). This is also the case in government ministries in Manicaland province. According to Nengomasha (2010) the increasing proliferation of digital records demands that organizations put in place effective mechanisms to ensure proper management of these records. This entails developing guidelines for the management of digital records. However, there is a lack of clear guidelines to guide government ministries in the management of digital records. The Public Sector Digital Records Management Framework, which is supposed to inform management of digital records in government ministries of Zimbabwe, does not provide clear guidelines on digital records management procedures and processes. It was, therefore, not clear as to how public sector organizations in Zimbabwe, and Manicaland province in particular, were managing digital records. Therefore, research was required to determine the way in which Manicaland province was managing digital records with a view to provide recommendations for improvements.

Aim and objectives of the study

The aim of the study was to assess digital records management practices in the public sector in Manicaland province with a view of recommending best practices for the management of digital records. The specific objectives were to:

- examine the influence of legislation, policy, and standards on digital records management in the public sector in Manicaland province of Zimbabwe.
- assess the competencies of personnel managing digital records in the public sector in Manicaland province of Zimbabwe.
- evaluate digital records management processes in the public sector of Manicaland Province.

Research methodology

The study was guided by a research methodology which was interpretive and qualitative in nature. A multiple case study research design was adopted for the study. The study used interviews and document review as data collection methods. Face to face interviews were conducted with the guidance of a semi-structured interview guide. The target population of the study was 22 government ministries in Manicaland. However, preliminary research revealed that only 15 ministries have managed to decentralize to the provincial level. The other government ministries do not have offices at provincial level, rather they operate through government departments under their purview. Out of the 15 government ministries in the province, only ten indicated that they are managing digital records. Therefore, the author purposively selected these ministries to participate in the study. For the purpose of presentation in this study, the ten ministries were coded as Ministry A, B, C, D, E, F, G, H, I and J. Initially, the author purposively selected four participants per government ministry including, a records officer, administration officer, action officer and IT officer. However, the number was reduced to three per government ministry after discovering that there were no IT officers in these ministries at provincial level. Twenty-seven participants (10 records officers, 10 Administration Officers and 7 Action Officers) were involved in the study. Three action officers were not available to participate in the study. The collected data was presented and analysed according to the research objectives, which were turned into research themes.

Findings and discussion

This section presents and discusses the findings of the study. The researcher was guided by themes derived from the study objectives in the presentation and discussion of the study findings.

Legislation, policies, and standards for digital records
This section discusses the influence of legislation, policies, and standards in the management of digital records in selected government ministries in Manicaland province.

Legislation for digital records
The study sought to find out how archival legislation in Zimbabwe was influencing digital records management in government ministries in Manicaland province. Legislation plays an invaluable role in digital records management since it provides a legal framework through which digital records management work could be performed legally. According to Ngoepe and Saurombe (2016:25) there is a need for archival legislation to embrace records created in networked environments in order to enable proper management and preservation of digital records. The respondents were asked whether they were aware of the principal Act governing the management of digital records in their ministries. Ten records officers were aware of the Act, the National Archives of Zimbabwe Act of 1986 (NAZ Act), as the Act governing the management of digital records in their respective ministries. However, nine administration officers and seven action officers were not aware of the NAZ Act.

The respondents who were aware of the NAZ Act were then asked to indicate how the NAZ Act was influencing digital records management in their ministries. The following are some of the responses from the respondents

> *...I think the Act is the one that empowers the NAZ to perform records surveys in government ministries… I guess that is the influence that the Act is having on management of records in the public sector….however my experience with surveys is that they are not adequately covering electronic records…*

Another respondent, records officer in Ministry A, indicated that:

> *…I read the whole Act when I was doing my studies…the act does not clearly spell our role in the management of digital records and by reading the Act you won't even get broad guidelines on digital records management and most of the challenges we face in managing these types of records in the ministry seem to emanate from this weakness in the Act…*

These responses, which aptly capture the sentiments of most respondents, illustrate that the NAZ Act is not effectively influencing the management of digital records in these government ministries. Mutsagondo (2017) attributed this ineffectiveness to the Act's lack of clear provisions for management of digital records. Studies in the ESARBICA region have also pointed to the lack of clear provisions for digital records in the archival legislation as one of the major challenges to the management of digital records in the public sector (Mosweu and Simon, 2018). In view of the above, this article argues that the lack of clear provisions for digital records in archival legislation is one of the major barriers to the establishment of an effective digital records management programme in government ministries in the province. The absence of clear provisions for digital records in the NAZ Act of 1986 means that there is no basis for demanding financial resources for the establishment of a digital records management programme that is not legislated.

Policies for digital records management

The study also sought to find out whether government ministries in Manicaland provinces have developed digital records management policies to guide management of digital records. Digital records management must be performed within a certain policy framework to ensure proper management of digital records. The International Records Management Trust (2009) advises that agencies, both public and private, must develop policies for the management of all forms of records including digital and paper records in order to successfully achieve an effective digital records management programme. However, the study revealed that all government ministries studied did not have digital records management policies to guide management of digital records in their ministries. Where policies existed, as indicated in Ministries D and J, the policies were for paper records. The absence of such policies was attributed to lack of guidance from NAZ, which is still to approve a national digital records management policy for the public sector in Zimbabwe, and lack of top management commitment to records management issues.

The study also revealed that the absence of digital records management policies is having a negative influence on the management of digital records in the ten ministries that participated in the study. One of the records officers in Ministry A buttressed this point by indicating that,

> *…there is no policy to guide digital records management work… in the absence of the policy, employees are left to be in charge of records they create and this is compromising the management of digital records in the ministry…*

This was the general sentiment of all 27 participants. The above findings reveal that it is taking personal initiative of individual members to manage digital records. In most cases, this led to inadvertent closure of information as individual members used their own discretion to destroy digital records.

The findings corroborate previous studies, elsewhere in the public sector, which also reported lack of digital records management policy to guide digital records management work. For instance, Nkala (2016:189) also showed that there were no policies for digital records in the public sector and as a result, the public sector organizations studied lacked proper guidance in the management of digital records. The absence of such policies was also cited by Mutsagondo (2017:124) as one of the major contributors to poor management of digital records in Midlands province of Zimbabwe. A survey of literature in the ESARBICA region has also shown that these findings are not peculiar to Zimbabwe. For instance, Tsabedze (2018) also revealed that most government ministries in Swaziland, now Eswatini, were operating without policies to guide the management of digital records. Perhaps, this explains poor management of digital records in the ESARBICA region.

Standards for digital records management

The study sought to find out whether standards have been adopted and how they are influencing digital records management in government ministries in Manicaland province. The management of records, particularly digital records, must be informed by standards in order to ensure that digital records management practices in an organization conforms to best records management practices as envisaged by international standards bodies. The study revealed, through document review, that the NAZ has recommended the adoption of several international standards for records management for the public sector of Zimbabwe. The NAZ recommended the adoption of International Standards Organization (ISO) 15489, 16175-1-3, 23081, 26122, 30300, ISO/TR13028 and ISO/IEC27001 (NAZ, 2018). This was done to ensure that digital records management practices in government agencies in Zimbabwe conform to international best practices.

However, the study found out that the 10 records officers, 10 administration officers and 7 action officers in these ministries were not even aware of the standards recommended by NAZ. The ten ministries, which participated in the study, have not adopted these standards in the management of digital records in their custody. Therefore, the management of digital records in the government ministries is not informed by international standards for records management. This appears to be a general trend in the public sector of Zimbabwe as evidenced by Chikomba (2019), who also reported that the financial parastatals of Zimbabwe were not implementing any standard for the management of digital records. Similarly, Mosweu (2018) indicated that although having standards regulating digital records management is critical, there were no standards and guidelines to inform the management of authentic digital records in the government accounting system of Botswana. Therefore, the management of digital records in government ministries in Manicaland province as well as in other countries in the ESARBICA region, as indicated above, does not follow best practice as envisaged in international standards for digital records management.

Staff competencies for digital records management

One of the key objectives of the study was to assess the competencies of personnel managing digital records in government ministries in Manicaland province. According to ISO 15489-1 (2016:10, people with assigned responsibilities relating to management of records should be competent to perform these tasks. This is critical in digital records management because the performance of digital records management work requires all the involved officers to be qualified, experienced and skilled in digital records management. The study established that ten records officers and one administration officer had educational qualifications in records management. The table below illustrates the educational qualifications of the participants.

Table 1 Educational Qualifications of participants

Qualification	Records Officers	Administration Officers	Action Officers
Msc in Records and Archives Management	0	0	0
Bsc in Records and Archives Management	2	0	0
Higher National Diploma in Records and Information Science	0	0	0
National Diploma in Records and Information Science	6	1	0
National Certificate in Records and Information Science	2	0	0
Other related qualifications	0	0	0

Despite performing some records management duties at some points, the study established that all the other administration and action officers did not have any qualification related to records management. Through interviews and document review, the researcher established that although the records officers had the qualifications, their programmes of study did not cover digital records management. The only exception was with holders of bachelor's

degrees, whose programmes covered digital records management issues. Therefore, the paper argues that, notwithstanding their qualifications mentioned above, most of the records officers in the government ministries in Manicaland are not qualified to manage digital records.

The researcher was also interested in ascertaining the experience and practical skills of officers managing digital records in government ministries in Manicaland province. Respondents were asked whether their experience in records management included management of digital records. The responses from all the respondents were sufficiently captured by a records officer from Ministry D, who indicated that,

> *....I and my colleagues here have vast experience in records management but we have not been exposed to proper digital records management and as such we lack the experience and skills for proper digital records management..*

All the officers (10 records officers, 10 Administration Officers and 7 Action Officers) interviewed also concurred that they lacked the practical skills required in the creation, capture, metadata management, classification, storage, disposal, and preservation of digital records as well as basic ICT skills required in the management of digital records. This has been compounded, as revealed by records officers, by lack of training and retraining with particular focus on digital records management. These findings imply that staff members managing digital records in the studied ministries have not developed the competencies required for digital records management.

The findings presented above are not peculiar to government ministries in Manicaland province. Studies in Zimbabwe, in the ESARBICA region and Africa in general have yielded similar results. Sigauke (2019:67) in a study on e-records at a City Council in Manicaland province of Zimbabwe also reported that most of the records officers at the City Council did not have the required training and skills for management of digital records. Similarly, previous studies in the ESARBICA region have also supported these results. For instance, a study by Kamatula (2019) in selected public offices in Tanzania demonstrated that records officers and those involved in management of digital records had inadequate training and skills because of insufficient content on their records management programmes, particularly on digital records management. These results reveal that officers involved in digital records management in the ESARBICA region are generally ill-equipped for the management of digital records despite having formal training in records management. The paper considers this issue as the major weakness of government ministries in Zimbabwe, and indeed in other developing countries, with regard to the management of digital records because proper digital records management requires competent staff.

Digital records management processes in government ministries in Manicaland Province

This section presents and discusses findings related to digital records management processes such as creation and capture, classification, access and security, storage, disposal, preservation, and business continuity planning for digital records.

Creation and capture of digital records

The study was interested in examining the creation of digital records in government ministries in Manicaland province. The creation and capture of records are integral to any organisation's business activities, processes, and systems (United Nations Economic Commission for Africa, 2017). In this regard, organisations must put in place deliberate measures to ensure that the required records are created and captured in records management systems. It was established, through interviews, that all government ministries were creating digital records in form of word-processed documents, email messages and attachments, databases, spreadsheets, and images. The researcher also established that five of the studied ministries (Ministries A, B, E, G and J) were creating digital records in business systems, particularly in the Public Finance Management System, a generic system for the management of public finances in Zimbabwe. The respondents (5 Action officers) in these ministries concurred that action officers were responsible for creating digital records that document business transactions falling on their line of duty. However, there were no guidelines or standards being applied on the creation of digital records as aptly capture by one administration officer who revealed that:

> *… there are no standards to guide creation of digital records, however, we are taught to create records during our induction to administration officer post...but there are no documented guidelines or standards…*

This clearly illustrates that the creation of digital records in government ministries in Manicaland province is not following any best practice for creation of records.

Previous studies have also reported lack of guidelines and standards for the creation of digital records (Mosweu, 2018; Tsabedze 2018). For example, Tsabedze (2018) reported that the creation of digital records was not adhering to any records management principles as it took individual effort of staff members in coming up with strategies for creation of digital records. The absence of documented guidelines and standards for the creation of digital records, as revealed by this study and others indicated above, makes it difficult to account for digital records being created in these ministries. It is, therefore, clear from the findings of the current study, that government ministries in Manicaland province have no system to ensure accountability in the creation of digital records.

International Standards Organisation (ISO) 15489-1 (2016) points out that records should be captured into a proper records management system if they are to be kept and managed over time. The respondents of this study were, therefore, asked how they were capturing digital records in their respective ministries. Most of the respondents revealed that they printed digital records to paper before capturing them into the paper records management system. However, the original digital records are not being captured into any records management system. This was attributed to the absence of an electronic records management system into which these records can be captured automatically. The failure to capture digital records is making it difficult to account for the same records in the ministries. According to ISO 16175-2 (2011) for the captured digital records to be meaningful as evidence of business process, they must be linked, through metadata, to the business context in which they are created. The researcher was, therefore, instigated to find out if metadata was being created for digital records. The study established that the ministries were not capturing metadata for original digital records, particularly those on computer hard drives and storage media. These records lack business context and therefore are a bundle of unintelligent records to users, who are not the creators of these records. The only time metadata is captured is when digital records are printed and managed as paper records in manual records management systems. This confirms

a study by Chikomba (2019) which also revealed that digital records are captured into records management systems of financial parastatals of Zimbabwe only through printing to paper.

Classification of digital records

The study sought to find out how records classification was being handled in government ministries in Manicaland province. The ISO 15489-1 of 2016 defines classification as the 'systematic identification and arrangement of business activities/ or records into categories according to logical structured conventions, methods and procedural rules represented in a classification system'. Records classification helps to describe, organize, and control records. The study established that six ministries had documented classification schemes that help them in classifying records while four ministries had no written classification schemes. Respondents in ministries without documented classification schemes revealed that they used knowledge they gained during induction in classifying records. The researcher also observed that, apart from the digital records printed to paper, the existing classification schemes were not being applied to the classification of original digital records since the classification schemes in most ministries have not been updated to take into account digital records being produced. Consequently, most digital records in the ministries are not being classified. Therefore, the study argues that information in digital records in these ministries is at high risk of inaccessibility since it is difficult to retrieve unclassified records.

The lack of documented records classification schemes and poor classification of digital records is one of the key factors, which are adversely affecting the management of digital records. Sigauke (2019) also reported that a City Council in Manicaland province of Zimbabwe was also operating without the records classification scheme and this was a contributing factor to poor classification of digital records at the City Council. The records classification schemes that exist in the public sector of Zimbabwe are designed for paper records and they have not been updated to cover digital records (Nkala, 2016). Tsabedze (2018) buttress these findings by revealing that most government ministries in Swaziland (now Eswatini) were not complying with basic records management principles such as the application of records classification to digital records. Poor classification of digital records in these government ministries, just like in government ministries in Manicaland province, is the major contributor to digital records access challenges.

Access and security of digital records

The researcher was also interested in finding out how access and security of digital records was being handled in government ministries in Manicaland province. Digital records contain information that serve as evidence of business activities of an organization that must remain accessible and secured. These digital records can be easily altered, deleted as well as accessed easily by unauthorized users. The authenticity, reliability and accessibility of digital records may be compromised if measures are not put in place to ensure that they remain accessible and secure. It is therefore imperative for organisations creating and using digital records to put in place measures to control access to digital records at the same time ensuring the security of the same records. Through interviews, the study established that there were no documented access and security classification schemes in the ten ministries to regulate access to digital records. Notwithstanding this, access to digital records was controlled in all ministries. All the respondents indicated that access to records, whether paper or digital records, was provided to staff members whose duties demand access to such records. The Head of ministries and their deputies were the only officers who could access records created and used across the whole ministry. Respondents from Ministries A, C, D, F, G, H, I and J indicated that access and use of digital records from other business units apart from one's unit

required approval from the head of that business unit and the head of ministry. These findings reveal that government ministries are controlling access to digital records in their custody thereby ensuring the authenticity and reliability of these records.

The findings on access to digital records, presented above, have also been reported by previous studies (Magama, 2018 and Chikomba, 2019). For instance, Magama reported that users of digital records in public departments in Masvingo province had access rights that corresponded with their duties and these were backed by user authorisation and authentication processes which safeguarded digital records against unauthorized access and tampering. These studies' findings together with the current study's findings suggest that, although the public sector has not reached the ideal position in controlling access to digital records, the government ministries are moving in the right direction.

With regard to retrieval, the researcher established that the retrieval of digital records for access across the ministries was a challenge. As illustrated by one of the records officers,

> *…without the assistance of personnel in the business unit that created the digital records, it is extremely difficult to retrieve and provide access to digital records since there is no central repository from where access to digital records can be managed…*

This challenge has been compounded by the fact that most of the records in digital form in these ministries have not been classified and captured into a proper central records management system; they are left in the custody of business units that created them, where access is managed. The only records whose access is directly managed by records management units are those digital records printed to paper. These challenges have, in most cases, delayed access to digital records in 9 (90%) of the studied ministries. The findings on retrieval of records differs with the findings by Kalusopa and Ngulube (2012), which revealed that it was taking some minutes to retrieve records for access by action officers in labour organizations in Botswana.

Aramide et al (2020) highlight that records must be protected both from damage and unauthorized access for them to remain authentic, reliable and accessible. This instigated the researcher to ascertain how the security of digital records was being ensured in the government ministries that participated in the study. Through interviews, the researcher established that the security of digital records was being guaranteed by limiting access to digital records to only authorized personnel. The use of passwords was also cited by all participants in the ministries as the most used security method for securing digital records. The use of firewalls and audit trails, as a security measure for digital records, was also reported in Ministries A, B, E, G and J that are connected to the Public Finance Management System. Seven records officers, 10 Administration officers and 7 action officers were not conversant with other security measures such as gateway filter software, encryption and lock and key. This suggests that these measures are not being promoted in the ministries that participated in the study. The prevalence of the use of passwords as a security measure for digital records is not confined to the studied ministries. Previous studies by Luyombya (2010) in Uganda and Nkala (2016) also reported the use of passwords as the major security measure being used to safeguard digital records in the public sectors of these countries. However, the prevalence of the use of passwords indicates a lack of a holistic approach to management of the security of digital records in government ministries in Manicaland province.

Storage of digital records

Records, both paper and digital records, should be stored in a way that ensures their protection from unauthorized access, alteration, loss, unauthorized destruction and disasters (ISO 15489-1, 2016). In essence, this is imperative in ensuring the authenticity, reliability and accessibility of digital records. In the current study, the researcher examined the storage of digital records in government ministries within Manicaland province. It was revealed through interviews that, while having central repositories for paper records, ten government ministries that participated in the study did not have central repositories for the storage of digital records. Digital records were stored in the business units whose functions generated the records. Therefore, the storage of digital records in the ministries is not managed from a central point. The researcher went further to ask the respondents to indicate the storage devices used by business units for the storage of digital records in the government ministries that participated in the study. The following table presents the results on this question.

Table 2 Storage devices used in government ministries

Storage device	**Number of Ministries using the storage device**	**Percentage**
PC Hard drives	**10**	**100**
Universal Serial Bus (USB)	**10**	**100**
Business System	**6**	**60**
Compact Disk (CD)	**4**	**40**
Digital Versatile Disc (DVD)	**3**	**30**
External Hard Drive	**2**	**20**

The table above indicates that PC Hard Drives and Universal Serial Bus were the most used storage devices in the storage of digital records in the studied government ministries. On a positive note, the study established that all removable storage devices were kept in cabinets under lock and key and that the use of passwords on computers protected digital records stored on PC Hard Drives and business systems. In this regard, the government ministries seem to be complying with ISO 15489-1 (2016) on ensuring secure storage of records. The widespread use of removable storage media such as Universal Serial Bus in the storage of digital records has also been reported in financial parastatals of Zimbabwe by Chikomba (2019). From the standpoint of this paper, the popularity of the use of the storage devices presented in the table emanates from the fact that all government ministries have not installed an electronic document and records management system with the capabilities to store digital records properly and securely.

Preservation of digital records

Pacific Regional Branch of International Council on Archives (2018) emphasizes that digital records must be preserved properly to ensure that they can be accessible and usable for as long as they are needed. Therefore, government ministries creating digital records must put in place deliberate strategies to ensure proper preservation of digital records. The strategies for preservation of digital records in government ministries in Manicaland province were, therefore, under spotlight in the current study. The researcher established through interviews

that most government ministries, in fact eight out of ten (80%) government ministries, used printing and filing, backups and migration as strategies for preservation of digital records. Two ministries indicated that printing to paper was the de facto strategy in use. Preservation strategies such as cloud computing, emulation, encapsulation were not being used in the studied ministries. The researcher has also established that despite the use of preservation strategies such as printing and filing, backups, and migration by all the government ministries, no single government ministry has adopted a systematic and coordinated approach to the preservation of digital records. The use of preservation strategies such as printing and filing, backups and migration seems to be the responsibility of concerned individual staff members rather than a ministerial obligation. Consequently, the continued accessibility of digital records in most of these ministries is at high risk.

Several studies in Africa have also reported similar findings thereby suggesting that organizations in Africa face similar situations regarding the preservation of digital records. Kalusopa (2018:168-169), in a survey of literature on digital preservation in Africa, also indicated that backup and migration were widely utilized as preservation strategies. Similarly, Magama (2018:21) in Masvingo province of Zimbabwe and Matlala (2019:104) at University of KwaZulu-Natal Archives have shown that back up and byte replication, migration and printing and filing were the mostly used digital records preservation strategies. The strategies are, however, still makeshift, and interim in nature thereby compromising the long-term preservation of digital records (Magama, 2018:32). This reveals a general trend whereby most preservation strategies adopted in Africa have not been developed to an extent of ensuring effective preservation of digital records.

Disposal of digital records

The disposal of records, both paper and digital records, is essential in ensuring that organizations retain only records necessary for the conduct of business activities thereby saving time and money (IRMT, 2009). The National Archives of UK (2012) advises that the disposal of records, either by destruction or transfer, should be based on established disposal schedules and follow an agreed process for either destruction or transfer. The current study, therefore, examined disposal of digital records in government ministries. It was revealed, through document review and interviews, that nine of the ten ministries had written retention and disposal schedules to guide disposal of records. However, the schedules are old and have not been updated to cover digital records that are relatively younger. One ministry indicated that it used the National Archives Standings Instructions to dispose records. However, as illustrated by one respondent,

> *…. the schedules were not being applied effectively on the disposal of digital records except for those digital records printed to paper…most records due for destruction and transfer to NAZ are still stored in computers and USBs in the ministry…*

This has created a scenario whereby officers are forced to unprocedurally delete digital records in order to create space in their computers and storage media. These findings concur with previous studies by Chikomba (2019) and Kalusopa and Ngulube (2012). For instance, Kalusopa and Ngulube also revealed that ‘there were no clear rules and procedures that authorise the retention and disposal of digital records in labour organisations in Botswana.

With regards to the methods used in the destruction of digital records in government ministries, the study established that deletion was the most used method in destroying digital records. The officers who participated in the study were not aware of secure methods of

destroying digital records such as overwriting, degaussing and physically destroying storage media. The prevalence of the use of deletion as a destruction method has also been reported by Mutsagondo (2017b) in public departments in Midlands province. He went further to reveal that the deletion of digital records was not done systematically owing to lack of policy guidelines. However, National Archives of Australia (2004) posits that deletion is not destruction and that deletion does not meet the requirements for destruction of digital records. From this perspective, the paper argues that the method used in the destruction of digital records in government ministries in Manicaland province is inappropriate since it does not ensure secure destruction of digital records.

Ordinarily, digital records with archival value, just like their paper counterparts, must be transferred from government ministries to National Archives of Zimbabwe for permanent preservation. Through document review and interviews, the researcher established that all government ministries have not transferred digital records to the National Archives of Zimbabwe. One of the records officers interviewed indicated that,

> *... we are actually in a dilemma because some of the digital records are of archival value yet they are not being transferred to NAZ and some records end up being deleted…*

This exposes digital records of archival value to unauthorised destruction as action officers explore ways of creating space in their computers and storage media. As has been reported by prior studies (Mutasgondo, 2017; Ngoepe and Keakopa, 2011), the failure to transfer digital records to archival institutions was attributed to the fact that the archival institutions have not established ICT infrastructure required to ingest digital records from government ministries. This was also the reality in government ministries in Manicaland province of Zimbabwe. The continued accessibility of these records cannot be guaranteed if they continue to be under the care of government ministries whose mandate is not to preserve archival records.

Business continuity planning for digital records

Business continuity planning for records specifies how an organization will ensure that accurate and sufficient records are prepared and kept in a way that would ensure effective resumption of business operations following a disaster (Territory Records Office, 2016). The researcher, therefore, sought to establish the availability of business continuity plans, preventative measures and disaster recovery and restoration procedures for digital records in government ministries in Manicaland province. The study established that, despite having vital records that are critical in re-establishing business operations after a disaster, all government ministries had no documented business continuity plan for digital records. As a result, there are no deliberate and documented measures to prevent or minimise the impact of a disaster on records as well as recovery and restoration procedures to be followed in the event of a disaster. Therefore, the risk of inadvertent closure to key business information in the studied ministries is very high in the event of a disaster. The absence of written plans for disaster management has also been reported by Magama (2018:31) who revealed that public departments in Masvingo province were operating without digital records disaster management plans hence posing a great risk to critical digital records in the event of a disaster.

Conclusion and recommendations

The study sought to assess digital records management practices in the public sector in Manicaland province with a view of recommending best practices for the management of digital records. The study concludes that most of the digital records management practices in government ministries in Manicaland province do not meet the measure of best practice as envisaged by several international records management standards, particularly the generic standard ISO 15489-1 2016. The lack of clear provisions for digital records in the NAZ Act of 1986, absence of policies for digital records and failure to implement international records management standards for digital records is having a negative influence on the management of digital records in government ministries that participated in the study. The performance of digital records management processes such as records creation and capture, classification, access and security control, storage, preservation, and digital records disposal is not adhering to international standards for digital records management. This has been compounded by lack of personnel with experience and practical skills required in the area of digital records management.

The study, therefore, makes the following recommendations:

- The NAZ Act must be reviewed to provide clear provisions for digital records management. This will create a basis for justification of the establishment of a digital records management programme in government ministries. Meanwhile, NAZ, using powers derived from section 15 of the NAZ Act, must issue detailed guidelines to regulate the management of digital records in the public sector.
- Government ministries should formulate digital records management policies to guide staff members on the management of digital records generated in the course of executing their business functions.
- The government ministries must implement international records management standards recommended by the NAZ in the Public Sector Digital Records Management Framework in order to ensure adherence, by the government ministries, to international standards for digital records management.
- Government ministries in Manicaland province must improve the competencies of officers managing digital records in the ministries. They must consider short courses on digital records management for officers charged with managing digital records. The short courses and short practicums in organisations with established digital records management programmes will equip the records officers with the practical skills required for digital records management work.
- Government ministries must adhere to international standards for records management, particularly ISO 15489-1 of 2016, in the performance of digital records management processes such as digital records creation, capture, classification, access and security control, storage, preservation and disposal. Adherence to international records management standards will ensure that digital records management processes in the government ministries are benchmarked to best practice for records management.
- All government ministries should install an Electronic Document and Records Management System, which will help government ministries in ensuring proper capture, classification, access and security management, storage, disposal, and preservation of digital records in their custody.

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