

# **ESARBICA JOURNAL**

**JOURNAL OF THE EASTERN  
AND SOUTHERN AFRICA  
REGIONAL BRANCH OF THE  
INTERNATIONAL COUNCIL ON  
ARCHIVES**

**Volume 35**

**2016**

ISSN 2220-6442 (Print), ISSN 2220-6450 (Online)

# MANAGEMENT OF EMAIL AS ELECTRONIC RECORDS IN STATE UNIVERSITIES IN ZIMBABWE: FINDINGS AND IMPLICATIONS FOR THE NATIONAL ARCHIVES OF ZIMBABWE

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Received: 20 September 2014

Revised: 5 June 2016

Accepted: 22 July 2016

## Abstract

*The administrative functions of state universities in Zimbabwe rely and actively use email communication in their official business. These business emails have significant transactional, reference and decision making value which merits the need for their capture, retention and management as electronic records. Any efforts by state universities to manage emails as electronic records, more so as public records, will require the supervisory guidance of the National Archives of Zimbabwe (NAZ) as stipulated within the National Archives of Zimbabwe Act of 1986. This paper presents selected findings from a Master of Philosophy study that surveyed six state universities in Zimbabwe in order to establish the state of management of emails as electronic records. The findings revealed indiscriminate strategies among officials in the separation of emails between records and non-records, the ineffective dependence on other institutional policies and reference to fringe legislation for the electronic recordkeeping of emails and the absence of recordkeeping professionals in email management responsibilities due to their limited ICT training and qualifications. These succinct findings render any recordkeeping interventions and long-term preservation strategies ineffective for the management of the emails as electronic records in the state universities. The paper proceeds to recommend a three tier framework that will position the NAZ to collaborate with state universities in the development and implementation of email policies, establishment of statutory guidance and procedures for electronic records and professional training and capacities development of staff and the design or improvement of email management and email archiving systems.*

**Keywords:** Email, electronic records, National Archives of Zimbabwe, state universities

## Introduction

The public sector of Zimbabwe is increasingly reliant on the use of email for official communication as part of their conduct of business and related official affairs (Sigauke 2015; Nasieku *et al.*, 2011:188). This is a result of e-government initiatives that have been adopted and implemented through the use of information and communication technologies (ICTs) in ministries, departments, public offices and state funded institutions of government (Keakopa 2008; Millar 2009; Kamatula 2010; Nengomasha 2012; Ngulube 2012). State universities in Zimbabwe have advanced the business communication activities of their administrations by

investing and setting up email systems that support the official communication of emails by their administrative and academic departments. The emails that are generated and received in the course of official business of the state university have significant value meriting the need for their effective capture, retention and management as electronic records.

The management of records by a government department or public funded institution in Zimbabwe is subject to the National Archives of Zimbabwe Act of 1986. This legislation principally mandates and authorises the National Archives of Zimbabwe (NAZ) to undertake a records and archives management service for the public sector to ensure the effective management of public sector records in Zimbabwe. Subject to section six of the NAZ Act of 1986, any efforts by state universities in Zimbabwe to manage emails as electronic records, more so as public records, will require the supervisory guidance of the NAZ. This is based on the fact that state universities are “statutory bodies” which are defined within the NAZ Act of 1986 as “any corporate body established directly by or under any Act of Parliament for special purposes specified in that Act.” Each state university in Zimbabwe was established by law as a grant funded public institution of tertiary education and subject to the responsible Ministry of Higher and Tertiary Education, Science and Technology Development (MHTE 2015).

In general, state universities undertake various activities associated with “learning, teaching and research and community development” and in the process they create a variety of records (Chinyemba and Ngulube 2005). Iwhiwhu (2005:345) explained that “various departments and faculties create and use records for the purpose of carrying out the activities of that department.” Winget *et al.*, (2006:4) posited that in the “university environment, individual information management behaviour determined the level of an institution’s records management and archiving success.” This assertion is applicable to emails which are generated, received and individually managed by officials in state universities within their respective departments and faculties.

### **Management of emails within the records continuum**

The management of emails as electronic records is subject to and best supported by recordkeeping approaches that are articulated in records continuum models (Roper and Millar 1999; Upward 2000; Yusof and Chell 2000). In particular, Roper and Millar (1999) proposed a records continuum framework where four recurring recordkeeping actions take place across the custodial domain of managing the records. These recordkeeping actions are repeated by creating institutions such as state universities and the archival authority such as the NAZ. The recordkeeping actions of the records continuum involve:

- i. identification of records;
- ii. intellectual control of records;
- iii. provision of access to records; and,
- iv. physical control of records.

The following table is presented as an interpretation of the Roper and Millar (1999) records continuum framework and juxtaposes state universities and the NAZ in the custodial management of emails as electronic records.

Table 1. Simplified adaptation of the records continuum for email records

Recordkeeping Actions	Records management procedures in State Universities	Archives management procedures at NAZ
<i>i. Identification of records</i>	Generation and receipt of business emails in official email accounts.	Selection and acquisition of email records on transfer in paper format only as a records series.
<i>ii. Intellectual control of records</i>	Organisation and classification of emails according to subject references, importance, and relevance to official business.	Arrangement and description of email record series in paper format only.
<i>iii. Provision of access to records</i>	Maintenance and use of email system. Online access to email server and offline access on email client applications. Copy printing emails and filing with the department/registry series of records.	Reference, access and use of paper records of emails is restricted to depositing government departments at the NAZ Records Center.
<i>iv. Physical control of records</i>	Disposal of email by server erasure, deletion from email client applications system; or preservation by paper copy printing and transfer to NAZ. Exporting mailbox messages to external tapes, hard drives/ERMS.	Public access to email archives is only permissible after 25 years. Preservation of paper series of email archives is indefinite.

As table 1 has shown, the management of emails in their electronic form largely rests with state universities as compared to the NAZ. The subsequent archival custody phase for managing emails is undertaken by the NAZ for those public record series that are transferred and accessioned into the institution within records series in paper form. Finally, the ultimate disposal or long-term preservation of emails in their original electronic format is solely the responsibility of state universities. The NAZ has limited custodial management over ICT infrastructure used to manage and preserve emails in state universities. NAZ is further restrained to actively accession electronic records from the public sector in light of an absence of the requisite ICT infrastructure for digital preservation activities (Sigauke and Chabikwa 2012:6).

### Challenges associated with managing emails as electronic records

The management of emails as electronic records in universities is challenging. Kyobe *et al.*, (2009:3) explained that records in a modern university are typically dispersed across the university due to the growth in ICT use. Electronic records in particular, are “located in shared network drives, local drives, research databases, institutional email and external web servers which makes the location, classification, sharing of information and enforcement of [recordkeeping] compliance more difficult” (Kyobe *et al.*, 2009:3). The identification and intellectual control of emails is similarly problematic under such a scenario. Wilkins (2008) and Lips *et al.* (2008:16) recommended organisations to use Electronic Records Management (ERM) systems as a step towards best practice, to ensure that emails can be captured, declared and managed effectively as electronic records. However, the use of software as a solution (SaaS) cannot adequately address other challenges of managing emails collectively identified by Keakopa (2008:78) and Nengomasha (2009:119) which include:

- i. The inability to actively differentiate between email records and non-records email;
- ii. The lack of legislation or public sector wide policy;
- iii. absence of core competencies in records and archives management; and
- iv. lack of stewardship and coordination in handling paper as well as electronic records.

The first two challenges point towards an institutional level problem of managing emails. In the absence of policy, state universities officials will be unable to separate emails between records and non-records. Flynn (2008) challenged officials in organisations to be able to “separate email business records (business-critical email) from personal and otherwise insignificant non-records”. Failure by state university officials to effectively separate between emails implied two scenarios.

Firstly, email records will be indiscriminately lost or deleted. Keakopa (2008) reported how public sector officials in Botswana deleted emails without any concern over the repercussions of such actions.

Recovery of these emails is a tedious task for email server administrators, let alone following the procedures involved seeking authorisation and access to tape backups. Second, there will be ephemeral emails which are retained unnecessarily, negatively creating email storage and retrieval challenges as well as make e-discovery efforts difficult. With limited discretion state university officials of not knowing what to keep and what to dispose, any related actions would have to be reviewed within the limits of impacting legislation.

The NAZ Act of 1986 continues to be applied as legislation for the supervisory guidance and management of public sector records in Zimbabwe to date. Dube (2011) critically revealed that the NAZ Act (1986) was out-dated and could not adequately cater for the management of electronic records generated within the public sector of Zimbabwe. Mutsagondo and Chaterera (2014) alerted that the lack of policy in the public sector had resulted in records management practitioners resorting to a hit or miss approach when managing electronic records. Sigauke (2015:103) also questioned the definition for record proposed by the NAZ Act (1986) which is hinged on “any medium”. The definition lacks a specificity for virtual access of to electronic records. Electronic records can exist on multiple platforms, media and in virtual/cloud storage environments rather than a single platform or substrate like paper platforms which can be deemed as a fixed medium for a static record. Emails as a type of electronic record can be synced and accessed via various email client applications and digital smartphone and tablet devices.

However, parliament is reviewing a draft Bill on Electronic Communications and E-commerce where an express provision is made for the admissibility of electronic evidence in a court of law and an explicit definition for an electronic record which may be “in the form of an SMS message, email or a message sent via an application such as WhatsApp or Facebook Messenger” (Hove 2015). This is a progressive development and any revisions or amendments to the NAZ Act should align to this law once it is passed by parliament. The outcome should place emails and all other associated electronic records generated within public sector institutions under the administrative supervision and inspection of NAZ as the archival authority of Zimbabwe.

Lack of professional competencies to manage electronic records can significantly detract any efforts by state universities and the NAZ to undertake recordkeeping measures throughout the continuum of care. Johare (2006:549) decried the “lack of local expertise, experience and facilities” in the training of archivists on modern technologies and the eventual management of electronic records. Kemoni (2009:197) similarly cites a study by Sejane (2005) in Lesotho where public sector officials were discovered to be unqualified and lacking in expertise to manage electronic records. Ngulube (2012) reports that the NAZ has also suffered from a staff exodus of experienced archivists leaving a vacuum of supervision by the NAZ. The role and responsibility of the NAZ is curtailed further due to the public sector recruitment freeze and poor funding afforded to the archival institution.

On the basis of the findings of these studies and the challenges they highlighted this study was driven to investigate the issue of managing emails as electronic records in the context of Zimbabwe’s state universities where no such study had been conducted.

## Statement of the problem

Management of email as electronic records requires a continuum of care that is shared between state universities as the creating organisations and the NAZ as the archival institution responsible for their eventual preservation. The challenges currently facing the management of electronic records in universities and the public sector have been well documented in the ESARBICA region and abroad. However, little was known as to the extent to which these challenges had impacted the management of emails in state universities in Zimbabwe. If the critical reports and disapproving assertions from notable scholars regarding the management of electronic records are put into perspective, those emails in state universities in Zimbabwe appear to be under threat. In a bid to investigate this gap, this study sought to investigate the management of emails as electronic records in state universities with a view to improve the recordkeeping practices for email records within the respective institutions.

## Research objectives

In light of the above statement of the problem, this study sought to achieve the following objectives:

- i. To discover how state university officials differentiated their emails between records and non-records.
- ii. To uncover the state of institutional policy and legislation for the management of email records in state universities.
- iii. To establish the state of professional competencies and training of staff responsible for the management of email records within state universities.
- iv. To ascertain the role and responsibility of the National Archives of Zimbabwe in the management of emails as electronic records within state universities.
- v. To recommend a framework for the management of emails as electronic records in state universities and the NAZ.

## Research design

The study was carried out as a cross-sectional survey of six state universities in Zimbabwe where targeted respondents were identified for interview or completion of questions in a questionnaire. The mixed method research design of the study was adopted and informed the data collection strategy at two levels:

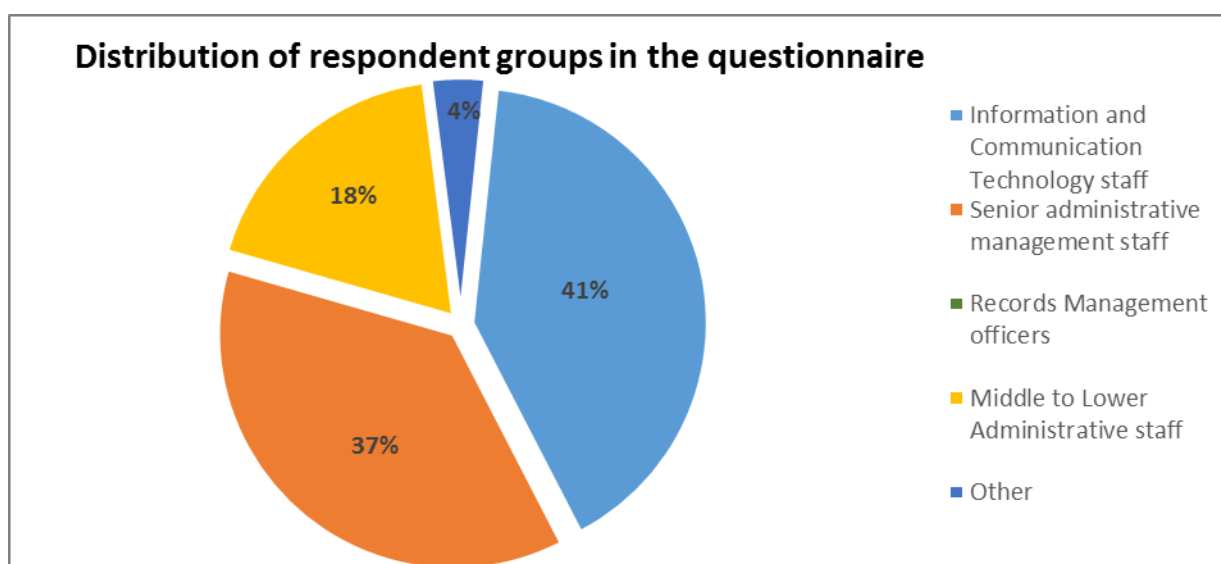
- i. Firstly, the cross-sectional survey method was adopted from a quantitative methodology based on the quantitative research framework of Robson (2008); and
- ii. Secondly, the study adopted non-probability sampling methods from the qualitative methodology, namely the snowball and purposive techniques. These qualitative sampling techniques had peculiar advantages that were attractive to this study and they have been endorsed for use in survey studies within records and archives research by Gilliland-Swetland (2000:267).

Any form of mixed method in research design involves a combination of quantitative and qualitative approaches in the overall research design for a study (Leech and Onwuegbuzie, 2009:265). A major benefit of mixing methods is that it allows “for a more complete analysis of the research problem” (Migirom and Magangi 2011:3757). Leech and Onwuegbuzie (2009:274) recommended for researchers to thoughtfully create designs that effectively address their research objectives. Resultantly, the mixed method research design suited this study and permitted for responses to be collected from a targeted population of officials in six state universities in Zimbabwe.

### Outcome and analysis of data collected

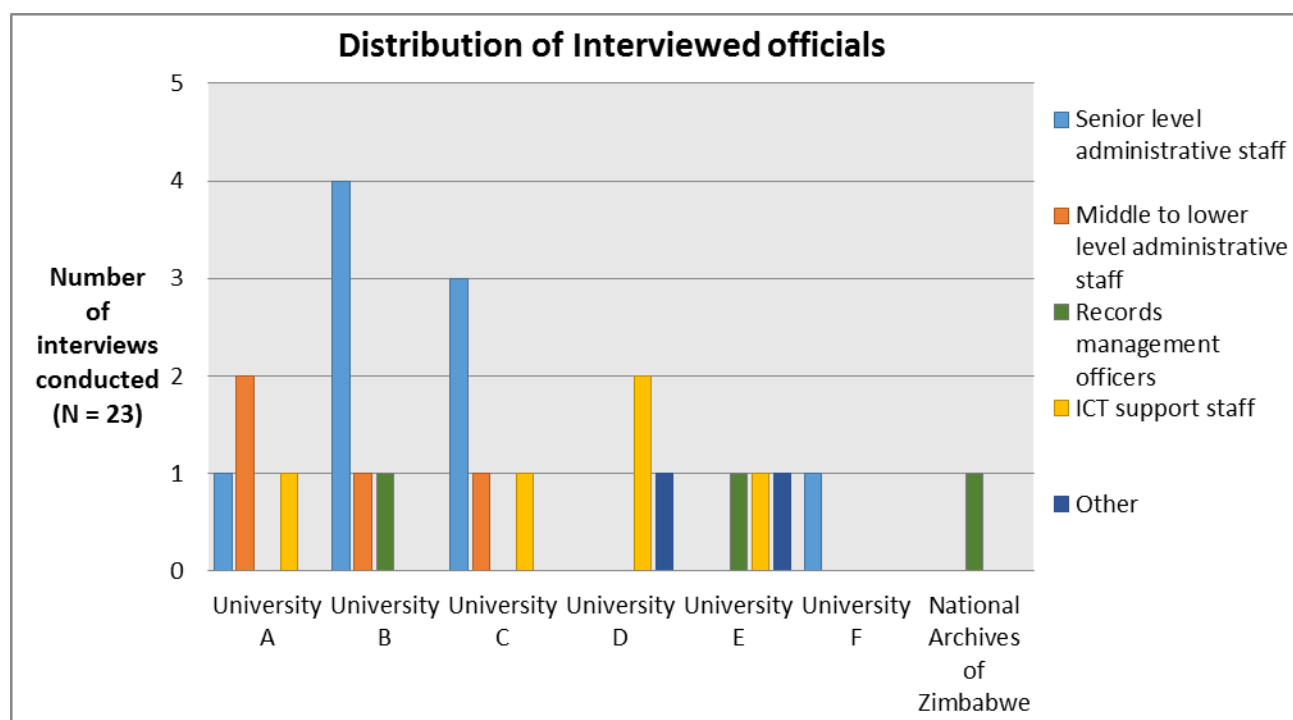
On completion of the data collection process, a total of twenty-seven (27) questionnaires were received from administrative officials, records management officers and ICT staff from the six state universities. A total of twenty-two (22) interviews were conducted with senior administrative officials and senior information and communications technology staff in state universities that responded to questions on how email records were managed as electronic records in their state universities. Finally, one (1) interview was conducted with the Director of the NAZ to find out the role of the archival authority in the management of email records as electronic records in state universities in Zimbabwe. Both quantitative and qualitative data was obtained and subjected to mixed data analysis according to the framework of Onwuegbuzie and Combs (2011:3).

The pie-chart in figure 1 illustrates the percentage distribution of the respondents from the six state universities in Zimbabwe that participated in the study through questionnaire only.



**Figure 1:** Percentage distributions of response groups from questionnaires

The interviewees as per state university are shown in the column graph of figure 2.



**Figure 2:** Distribution of officials that participated through interview in Universities A – F and the NAZ

Table 2 presents the job titles of the respondents that were interviewed in line with their level of seniority within the six state universities.

**Table 2:** Job titles of participants interviewed in the study

Respondent Group	Number of interviews	Percentage of total interviewee population (N = 23)	Current Job Title
i. <i>Records management officers</i>	3	13.04%	Director of the NAZ. Chief Records Clerk, Admission and Student Records Registrar
ii. <i>Senior level administrative management staff</i>	9	39.13%	Acting Registrar, Deputy Registrars (2), Senior Assistant Registrar, ICTS Directors (2), ICT Deputy Director, ICT Manager. Network Manager
iii. <i>Middle to lower level administrative management staff</i>	4	17.39%	Administrative Assistants (3), Data Capture Clerk, Secretary, Human Resources Assistant
iv. <i>Information and communications technology staff</i>	5	21.74%	Network Administrator, Network technician, ICT Systems Analyst, Database Manager, ICT Users Support Manager
v. <i>Other</i>	2	8.69%	Public Relations Officer, Senior Library Assistant
<b>TOTAL</b>	23	100%	

### Presentation of findings and discussion

The presentation of findings by this study is made in line with the research objectives that were originally set out before. Discussion of the implications of each major finding is made in relation



to literature and other related studies on the topic of managing emails which corroborate for validity in this study.

### **Differentiation of emails between records and non-records in state universities**

Data from the questionnaire showed that 89% of the respondents used and had access to an official email account to send or receive email within their state universities. The interviewees also revealed that official email accounts had their email address customised as per the name, initials and surname of the university official or the title of the university department or section.

The same respondents were requested to indicate on a percentage scale from 0-100%, the approximate quantity of emails that were business related and also indicate which of those emails would constitute evidence of their conduct of university business and so warrant their retention as records. Findings from the questionnaires revealed that twenty (74%) respondents expressed that of all their emails, at least 50% or more were business related. This study has shown that a large volume of emails in state university official mailboxes are deemed related to business and most likely worth retaining as records. However, the same respondents indicated that their state universities were yet to declare if any specific emails within their mailboxes were to be kept as official records. This is in contrast to findings reported by Miles (2014:4) for a study which revealed that only 10% or 20% of the electronically stored information including archived emails and shared drives was useful to the business with the rest of the stored content deemed redundant, outdated or trivial.

State university officials that were interviewed in this study were requested to explain which emails they considered to be official records. The state university officials also concurred that those emails that captured university business were justified to be treated and managed as records. Findings revealed a common assertion that most emails that were sent to or received from a senior authoritative official and those emails that were particularly needed for future reference in decision making were to be retained as records. Specific responses that were collected from the interviews to affirm their assertion, included “emails are important records”, “better management and security of emails is important to preserve and prevent information in the emails from being lost” and “emails are records and there is a need for reference to them once again”.

Conversely, the state university officials were asked to determine specific types of emails they identified as a non-official records. The respondents identified non-record emails as:

- i.** spam emails;
- ii.** chain emails;
- iii.** redundant emails that had been copied from a bulk mailing list;
- iv.** emails that required no further action from the recipients; and
- v.** emails with neither relation to nor value for both current and future university business.

From the standpoint of this study, the distinction between record type and non-record type emails by state university officials was made without reference to any standing policy or procedures guidance. The basis of separating between email records and ephemeral records was a self-discretionary task of the email account user. Furthermore, the nuisance of spam and social emails was clearly evident across all state universities and these ephemeral type of emails were unambiguously identified as non-records.

### **State of institutional policy and legislation for the management of email records in state universities**

The study sought to discover the availability of relevant policy and legislation that guided officials in the management of emails as electronic records. Findings from the interviews in particular, revealed that four of the six state universities had officials who had identified specific legislation and had various policies for the management of their email records. State university officials cited two legislations as particularly having an impact on the managing of emails as records. These were the Official Secrets Act of 1970 and the Access to Information and Protection of Privacy Act of 2002. The National Archives of Zimbabwe Act of 1986 as the prime legislation for records and archives management in the public sector was largely unknown to interviewed officials. A deplorable forty-seven (95%) respondents in the questionnaire survey were unaware of the NAZ Act of 1986 as legislation that had both statutory and policy implications for the management of emails as well as other records in the state universities.

Findings from the questionnaire indicated that 53% of the respondents revealing that no specific guidelines for the management of email as records were in effect or in an existing policy. A further 27% of respondents disclosed their ignorance to confirm if any such guidelines were in existence or in effect within any other policy. This state of unfamiliarity with existing email policy in state universities in Zimbabwe stands pale against findings by Seow *et al.* (2005:48) who reported an estimated 85% of their respondents confirming the existence of an email policy in Malaysia. For the few senior officials that were privy to policy for managing email, the implementation of policy was achieved in three main scenarios:

- i. As articles within the broad university Records and Information policy;
- ii. As a section within the Information, Communication Public Relations policy; and
- iii. As specific clauses within the state university ICT policy.

The summation of these findings reflects a lack of awareness of email policy among middle to lower level staff, its fragmented use in other policies and the obscurity of the National Archives of Zimbabwe Act of 1986 in state universities. This state of affairs regarding policy and legislation for the management of emails as records in state universities in Zimbabwe is deplorable. Dube (2011) warned that a lack of legislative psyche can lead to the mismanagement and destruction of records and archives and the loss of valuable information in the public sector.

### **State of professional competencies and training of staff responsible for the management of email records within state universities**

Mnjama (2002:38) specified that the minimum level of qualification(s) to be attained for prospective recordkeeping staff wishing to be appointed to the “Records Manager/University Archivist [positions should] be at least at the certificate and diploma levels.” Using this benchmark, findings from this study showed that only 12% of the respondents had precise qualifications in records and archives management studies in the state universities that were under study. Findings from this study also showed that 78% of state university officials in the questionnaire had attained at least a first degree or higher in various disciplines of study ranging from ICT (49%) to administrative management (31%). These respondents confirmed that they were appointed to their positions based on their qualifications.

The lack of qualified recordkeeping staff in university establishments has also been reported by Chinyemba and Ngulube (2005:11) and Asogwa (2013:799). This study corroborates their findings where recordkeeping qualifications are largely sparse among those officials appointed with a responsibility for managing records in universities. These findings point out that state

universities have preferred to appoint staff with ICT qualifications to have a greater responsibility for the management of emails. Moore (2004:2) and McKinnon (2004:6) observed that the management of official email is often ignored or left exclusively to the realm of ICT department control. Findings obtained from interviews in this study present a continuation their observations. The interviews with senior officials established that ICT departments were the leading administrative sections in state universities responsible for the storage and archiving of university emails ahead of the Registrar's or the records and information Management related sections of the state university.

### **The role and responsibility of the National Archives of Zimbabwe in the management of emails as electronic records within state universities**

Notable archiving authorities in ESARBICA and abroad have taken meaningful steps to manage emails as records generated within their respective public sectors. The initiatives have largely been articulated in legislation and impressed on the public sector through policy and the delivery of procedure manuals or guidelines. Of particular interest to this study was to discover if the National Archives of Zimbabwe had any specific programme for the management or preservation of electronic records which included guidelines or strategies for email generated in state universities as well as the greater public sector of Zimbabwe. The study sought responses from the Director of NAZ through interview regarding this matter.

In the interview, the Director of NAZ re-affirmed the legislative mandate given to NAZ as vested in the NAZ Act of 1986 to extend over the management of emails as electronic records. The Director specifically referred to section six of the NAZ Act of 1986 regarding their role to undertake supervision and inspection of public records which were also created in state universities. The Director also explained that NAZ had the records centre repository available for state universities wishing to store those emails that were printed to paper. This confirms the custodial based, paper-suited lifecycle approach to recordkeeping for public records and archives for the public sector in Zimbabwe.

The NAZ has its operations and facilities purposefully designed to cater for the storage of semi-current public records in paper format in a Records Center for a period of 25 years pending possible disposal or permanent preservation at the Public Archives. The Director of the NAZ justified the basis for NAZ to have a preference for the paper format for emails because emails are electronic records and they are equally prone to technological obsolescence and readability failure. In addition, the Director, explained that access and use to emails is challenging since they are stored with state university email server systems without the oversight of NAZ.

Findings by this study established that in all six state universities email backup was the predominant preservation and archiving strategy for emails. However, the email backup strategies of state universities were likely to be poorly designed given that respondents had sketchy explanations about the nature of the strategies and the archiving procedures involved in preserving emails. Two state universities reported to use tape back-ups for archiving email with an official from one other institution explaining the "back-up approach for emails relied on secondary media". It was unclear whether these secondary media were of an archival standard such as M-disc for the storage of emails as digital archives. Tower Software (2004:6) explained that "back-up tapes serve a purpose of enabling an organisation to restore IT infrastructure and current data...they are not meant to serve as archives." Prom (2011:37) also warned organisations against relying on tape backup strategies to archive emails as these strategies simply recreate the last system state, not restoring the emails that may have been deleted at a previous

time and many emails are eventually purged from the backup store as old backups are overwritten by newer ones.

Findings from the interview with the Director of the NAZ discovered that the public sector was yet to be furnished with policy from the archival authority on the management of electronic records. In the absence of policy, the Director of NAZ recommended for public sector institutions, state universities included, to appraise their emails and select those emails that are deemed necessary for long-term preservation to be printed and transferred in paper form to the NAZ. This was the Director's recommendation as best practice for managing emails as records. The Director of NAZ further highlighted that up and until the necessary ICT infrastructure was in place at NAZ, state universities should manage their emails and their email systems using all possible measures to ensure their preservation within those email systems.

Ultimately, findings by this study show that the NAZ acknowledges its role and mandate in the management of emails as records within state universities in Zimbabwe. However, the absence of requisite ICT related infrastructure at NAZ has incapacitated the institution from providing a storage and preservation service for these records in electronic format. This limits the role and mandate of NAZ for emails that are in transferred and accessioned in their paper format only. The absence of an electronic records policy for the public sector implies that state universities have to manage emails and other electronic records with whatever strategy that can best secure and preserve them over time.

### **A proposed framework with recommendations for the way forward**

This study has established that the management of emails as electronic records in state universities in Zimbabwe is beset with many hurdles. The possibility of NAZ having to intervene and assist the situation is a challenge given the nature of its custodial based, paper-suited lifecycle approach to recordkeeping for public records and archives for the public sector in Zimbabwe.

In light of the findings observed in state universities, an integrated and collaborative framework is proposed for managing emails as electronic records. Ouma (2012:32) called for a culture of collaboration and partnership in order to sustain services delivered by archival authorities such as NAZ, where integrated solutions and opportunities to work with partners can improve services. Kemoni *et al.* (2007:17) also observed that good recordkeeping systems can achieve desirable outcomes when "records managers and archivists work together" to implement "appropriate recordkeeping functions throughout the lifecycle or continuum of records". The proposed framework for improving the management of emails as electronic records will be achieved through a number of targeted outcomes based on three tiers of policy, technological infrastructure and professional training and capacity development.

#### **A. TIER 1. PROFESSIONAL TRAINING AND CAPACITY DEVELOPMENT**

**Target 1:** Recordkeeping staff in state universities should pursue further training in electronic records management in order to develop their ICT related skills and competencies.

**Target 2:** State universities should revise the prospective and incumbent job descriptions, responsibilities and job specifications for recordkeeping professionals to include responsibilities for managing electronic records.

**Target 3:** Advanced state universities should offer continuous professional exchange programmes to responsible staff from other institutions lagging behind to gain practical experience and situational training in the management of electronic records including email and

digital archiving implementations.

## **B. TIER 2. POLICY DEVELOPMENT AND IMPLEMENTATION**

**Target 1:** The email policy of state universities should enforce compliance and align with impacting legislation. In particular, relevant clauses should state how the National Archives of Zimbabwe Act of 1986, the Official Secrets Act of 1975, the Access to Information and Protection of Privacy Act of 2002 and the Interception of Communications Act of 2007 and any other relevant legislation in effect or yet to be promulgated by government such as the Electronic Communications and E-commerce Bill will have a legal bearing on the management of email records of the state university.

**Target 2:** The email policy of the state university should be drafted, approved and promulgated to all university staff in order to explicitly provide instructions to state university staff on the use of the official email system domain, their use of officially allocated email accounts, the use of authorised and officially installed email client software(s) and supporting access tools for university emails and subsequent management of email records.

**Target 3:** The email policy of the state university should stipulate the circumstances in which university business emails can be explicitly and strictly identified, designated and retained as email records as well as those emails that are non-record emails.

## **C. TIER 3. TECHNOLOGICAL INFRASTRUCTURE**

**Target 1:** Email archive programmes should be developed in state universities with NAZ approval. The established email archives system should satisfy the requirements of the Open Archival Information System Reference Model and the functional requirements specified by the InterPARES 3 (2016) report for managing emails.

**Target 2:** Archiving of email through a clear coordinated preservation programme that shall preserve both primary and secondary storage platforms for emails. This should be a collective effort between the ICT department and the responsible recordkeeping division of the state university and the NAZ.

**Target 3:** Selected email archives should be migrated with supervision and inspection of the NAZ from state university email servers to near-line and offline external server(s), or offline archival storage media such as digital linear tapes. Express email archives can be established with cloud service providers for institutions with financial hurdles in developing their ICT preservation infrastructure.

Ultimately, in order for the proposed framework to succeed, the collaborative partnership between state universities and NAZ should be formalised by memoranda of understanding and backed by financial funding from both government and partnering stakeholders with an interest in supporting the NAZ and state universities in the management of email as electronic records in Zimbabwe.

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