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TRANSITION FROM ANALOGUE TO DIGITAL AT THE NATIONAL ARCHIVES OF ZIMBABWE

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Abstract

This paper seeks to bring to light the contemporary landscape of digital technology at the National Archives of Zimbabwe (NAZ) and its move towards the provision of access and awareness of its historical collections through technology. The institution has geared towards opening its doors to the public through outreach programmes; public exhibitions; websites; oral history projects; publications and broadcasting archives with changing circumstances. The ideology of taking the archives to the citizens has paved way for outreach archivists to do the right thing, in line with their obligations to provide access to information. The National Archives of Zimbabwe, like any other archive, preserves records that have been selected for permanent preservation because of their historical and enduring value. The paper explores the challenges faced by the public archivist in the management of traditional and analogue archives and the subsequent need for transition to digital technologies. The adoption of digital technologies in the management of public archives will enable the public archivists to provide faster and easier access to the archival materials. Digital technologies enhance information sharing and reduce redundancy of the collections. The researchers used a qualitative case study methodology with an interpretivist perspective where the main focus of the research was on the NAZ's Public Archive. Interviews, document analysis and observations were used as the major data collecting methods. The results showed that the institution had made a good start, encouraging progress and was still working on the migration from analogue technology to full adoption of digital technology.

Introduction and background

Digital technology is the new technology that is used in every sector, and archival institutions have not been left behind. Living in a hyper-connected society where dumb devices are becoming part of the Internet of Things (IoT) family, people are being awakened by digital technology on their smartphones; washing their clothes using automated machines; cooking on smart stoves and receiving adverts on smart fridges. The technological development resonates well with Open Archival Information Systems (OAIS), online access, and digital archiving altogether pushing archival institutions to higher dimensions of engagement and renewing public interest. Clough (2013:2) states that today, no organisation is immune to the

disruptions caused by technological innovation. In the same breath, Blais (1995) argues that technological advances challenge our traditional archival practices and provide opportunities for improved archival service. The International Records Management Trust (IRMT, 1999) states that technology is not equally obtainable throughout the world or within individual countries. Many developing countries do not yet have the technical capability, management infrastructures, in-country hardware and software support facilities or skilled personnel to support the extensive introduction of computers within the public sector.

The present generation has a huge appetite for digital technologies and they understand computers and the virtual world more than the old-fashioned way doing of research. Archival institutions need to adopt digital technology within their repositories to make visits more appealing and attractive to the tech-savvy generation. The cyberspace environment now makes it possible for public archivists to notify the public on their smartphones and social media about their recently processed archival materials. Blais (1995) states that the future of archives will be determined in many ways by the extent to which they are able to display their knowledge in interacting with both information providers and users within a technology-driven information society. Thorman (2012:6) is of the view that access to physical collections in brick-and-mortar buildings is limited due to physical restrictions such as location and the need of staff assistance. However, the same author further states that digitisation projects, in combination with Web 2.0-based promotion and distribution efforts, can dramatically lower the barriers to access and make archival collections accessible to those who would never be able to visit the archives in person. Many scholars such as Thorman (2012), Ferriero (2012) and Blais (1995) all advocate that technology is an opportunity for archival institutions to promote access to their collection and reach a greater part of the worldwide village. The National Archives of Zimbabwe (NAZ) has two public archives (the Harare public archive and the Bulawayo public archive) where the study was conducted.

Contextual profile of the National Archives of Zimbabwe
The National Archives of Zimbabwe (NAZ) came into being through an Act of Parliament of September 1935. At the time, the department was under the government of Southern Rhodesia. Soon after the country gained its independence in 1980, the department became known as the National Archives of Zimbabwe with a mandate of acquiring, preserving and providing access to the historical and cultural heritage of the country. Its vision is to become the leading custodian and provider of the documentary heritage of Zimbabwe. The purpose of the NAZ is to ensure the permanent survival of the nation's history and ensure that the basic infrastructure and systems are in place to enable the institution to efficiently offer an archival management service to the nation. The NAZ has several sections that include the Records Centre, which is responsible for the government, parastatals and local authorities' semi-current records; the Public Archives, which is responsible for the housing of both public and private records and manuscripts; and the Reprography Unit, which is responsible for reproduction and the preservation of archival materials through microfilming, photocopying and pictorial reproductions. The audio-visual unit is responsible for housing of the audio, video, still and motion pictures and the library that houses the printed publications of Zimbabwe. The Conservation Unit is responsible for repairing paper-based records that are deteriorating and has a laboratory that deals with the physical repairing of the building and its maintenance.

Statement of the problem

Digital technology is one of the essential tools that promote and facilitate access to archival materials. Scholars such as Thorman (2012), Ferriero (2012), Saurombe and Ngulube (2016) and Chaterera (2017) argue that technology is an opportunity for archival institutions to promote access to their collection and reach a greater part of the worldwide village. Matangira (2016:2) notes that the archival systems established in the colonial era in Zimbabwe did not actually collapse, in fact, the continued use of these archaic manual systems from the colonial past became the main source of technological obsolescence and limited technology uptake and stalled access to the National Archives of Zimbabwe. Manual finding aids create major challenges in accessing public archives in cyber-space. Like the rest of archival institutions in developing countries, the NAZ greatly relies on manual finding aid systems to facilitate access to their collection. The director's annual report states that lack of computer accessories and delays in the repair of equipment hindered full computerisation of the archival system (National Archives of Zimbabwe, 2018).

The following questions guided this study:
- What digital finding aids are used to provide access to public archives at the NAZ?
- What digital tools are in place for reference services at the NAZ?
- Is the National Archives of Zimbabwe visible on social media?
- Do staff members have knowledge and skills on digital technology at the NAZ?

Theoretical framework

The theoretical framework that guided this study was the information operators' theory by Szekely (2017) which puts emphasis on the adoption of technology for taking the collections to the community served. The theory gives a framework for copying applications in public archival institutions and the concept of generating images to facilitate archival access using reprographic techniques. According to Szekely (2017), the term "operator" refers to several archival functions, including recording, coding, structuring, storing, processing, making accessible, copying and combining of public archives. Szekely (2017:9) also states that the key technologies in public archival institutions are digitisation, computerised processing and online visibility; the key experts are information technology professionals and information brokers. Internet search engines and online surfaces conceal archival institutions from the majority of remote users. According to Adom, Hussein and Agyem (2018), the theoretical framework is based on prevailing theory or theories in the literature that have been confirmed and authenticated by other scholars.

Research methodology

The qualitative methodology was adopted in this research. Trochim (2006) states that a research design provides the glue that holds the research project together. The design is used to structure the research, to show how all the major parts of the research project, the samples or groups, measures, treatments or programmes and methods of assignment work together to try to address the central research questions. A case study is an empirical inquiry that investigates a contemporary phenomenon in its real-life context, when the boundaries between phenomenon and context are not clear, and uses multiple sources of evidence (Yin 1987). This current study made use of the single case study research design where a single case phenomenon (the NAZ Harare head office) was studied.

A case study research design was adopted to generate a comprehensive, multi-faceted understanding appreciative of a complicated issue in its real-life context where a researcher explores a programme or an event in depth (Creswell 2003:15). In investigating Digital technology at NAZ a case study was preferred as the best research methodology. The population of the research comprised of the deputy director of the NAZ who is responsible for the public archives, research and library service division; five public archivists from the public archives and library service division; three information communication technology (ICT) officers; three archivists from records services; audio visual archivists and the editor. Data collection in the study was triangulated and consisted of observations, face-to-face interviews and document analysis. Documents can be an incentive for pathways of investigation that can be followed only through direct observation and interviewing (Patton 2002). As a way of backing up and supporting data obtained from interviews and observations, the researcher reviewed documents generated and kept within the public archives which include the analysis of the NAZ website, Facebook page, twitter page, KOHA library system software, inventories of public archives, indexes, catalogues and the guides to the public archives collection. Thematic data analysis was used where themes and patterns were identified to address the research questions. Interview transcripts, observation and document review notes were encoded and categorised in line with sub-themes or research questions of the study. The results are presented in the next section.

Findings and discussions

The following section presents and discusses the outcomes that originated from the research.

Digital finding aids used to provide access to public archives

The purpose of the first research objective was to determine digital finding aids available at the NAZ. The researcher observed that most of the NAZ's public archives finding aids, which include indexes, accession registers for archival materials and descriptive inventories, were still traditional. On entering the public archives' reference desk, the researcher noted a large wooden cabinet labelled "the catalogues" that contained catalogue cards organised by the names of records creators and subject headings. Researchers would browse through the card catalogues to check which collections might meet their needs. Responses from the interviews with the public archivist in the research section indicated that, "the institution through its website (www.archives.gov.zw) has also created a database link for the public archives which just gives an overview of the institution's collection using the KOHA software". Responses from public archivists indicated that the institution has made great strides in digitising delineation records and they are now working on selecting the best software to administer the digital records for online access. Responses from the public archivists indicated that death notices, death register (DR), electronic database, photo collection, electronic inventory and library collections were part of the finding aids on the NAZ website. The library section of the institution also managed to upload and International Standard Book Number (ISBN) form on the institution's website for remote access to its patrons.

The finding aid includes a wide range of formats, including card indexes, calendars, guides, inventories, shelf and container lists and registers (Society of American Archivists 2019). Moyo (2012:79) states that, over the past years, the NAZ has dedicated its liveliness to giving access to archival holdings, but full access has been delayed by the non-existence of finding aids in archives that should have been available. The International Council on Archives

(2011) states that access is the availability of records for consultation as a result of both legal authorisation and the existence of finding aids. Murambiwa and Ngulube (2011:89) are of the view that many archival institutions in the East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) region, the NAZ included, are working towards the adoption of an automation technology tool for some of the information about their collections and the finding aids in order to promote and facilitate online access to their products and services. In developed countries, this is easier; for instance, the National Archives of the United Kingdom created Access to Archives (A2A), a site hosted by the National Archives. A2A's website allows users to search across finding aids from more than 400 repositories in England and Wales that vary in detail, and date from the eighth century to the present.

One of the most important aims for almost every archive today is to digitise their material and provide online access to users because online access has a great deal of advantages such as: increasing usage of archival material; increasing provision of user services; reducing the workload of archivist; increasing reputational prestige; economy of money and economy of time (Şentürk 2014).

Digital tools for referencing

The purpose of research objective two was to determine the digital reference tools available at the NAZ. To achieve this, interviewees were asked to highlight the digital archival reference tools available at the NAZ. Interview responses from the chief archivist of the library services section indicated that, "the electronic mail of the NAZ is archives@archives.gov.zw, which is the chief digital reference tool in place for digital reference services." Through email, the chief archivist highlighted that, "we respond to an average of 20 mails per day." The email address of the institution is also placed on the website of the NAZ, which is hosted by the Government Internet Service Provider (GISP), and the NAZ is responsible for the uploading of content to the site. Cox (2007) laments that if archivists are struggling to communicate by email, tools of increasing popularity, especially among the tech savvy generation, such as instant messaging (IM) and online chat, can also be used. Archival institutions need transformation to fit the technological generation who now uses the archives.

Malbin (1997) notes that the archivist needs to reassess attitudes toward reference services to improve the use of archival holdings as well as to improve the reference. Apart from email as the chief digital reference tool, responses from the interviews with the public archivist indicated that, "the institution also relies on Facebook chat messenger and Twitter messaging services when responding to researchers' inquiries." White (2001) defines digital reference as an information access service in which individuals ask questions via electronic means. In turn, well-informed individuals answer questions, and responses are transmitted via electronic means. Cox (2007) highlights that, in this age of high-speed technology, more and more archival facilities are shifting their reference services from human contact to digital reference services. Library and archives users have been using electronic mail to connect with reference staff for at least 20 years. Digital reference arrived in the archival fraternity with modest commentary, with only an occasional essay in the professional literature exploring the topic (Tibbo 1995). Cook (1984-1985) states that archivists must outclass simple information and mere information administration if they are to lead others to find knowledge and meaning among the records in their care.

Presence of the NAZ on social media

The other research objective was to establish whether the NAZ was visible on social media. Interview responses, observations and the artefact analysis concluded that the NAZ uses Facebook (National Archives of Zimbabwe) and Twitter (@ArchivesZim). The Facebook page had 602 likes and Twitter had 73 followers. Responses from interviews with the chief archivist indicated that, "the institution utilises its Facebook page for publishing major events of the institution and basing on the post reach out from 15 July to 11 August the statistics was at 63 percent". The chief archivist further highlighted that, "the low response in social media is actually a reflection of the old concept and tradition of archives for the elite and not for everyone, suggesting that the low response from the physical environment is also mirrored in the digital space." Crymble (2010) states that as times change, so do the methods with which archives seek to reach out to their potential clientele. While most archives would relish the opportunity to launch an expensive professional advertising campaign to promote their holdings and services, few can afford it. The developments in ICT have helped to increase access to archival resources and thereby improve the quality of service delivery in archival institutions. Dickson and Holley (2010) state that the use of social media by archival institutions will enhance communication and outreach to the community they serve.

Chaterera (2015) laments that Zimbabwe's practitioners and professionals working in the country's state archives should stop regarding Web 2.0 technologies as a threat or misfit to their work and embrace these technologies as tools that can substantially reach out to the people and positively improve their position in the society. Thorman (2012:2) states that the term Web 2.0 technology, also known as social media, is used to describe the various websites, services and platforms that archives use to promote their collections and facilitate interaction with their users.

Digital technology skills and knowledge of staff

One more research objective was to determine the technological knowledge of public archivists to promote access to public archives. Through observation, the researchers realised that, in some instances, archivists struggled to use the available resources to support archival activity. Interviews helped to figure out that inadequate training of archivists was a major hindering factor. One of the archivists from the public archives division stated that, "technology is constantly changing and most of us do not have the relevant training in the use of modern technologies and as such we do not have the prerequisite technological skills to effectively use available resources to support archival activities." Observation also showed that most public archivists lack knowledge of how information technology is applied to archival administration and access provision. Ngulube et al (2013:145) state that knowledge and skills in promoting access and use of archival materials are essential for implementing and promoting access and reference activities. Archivists need to know how information technology is applied in promoting and facilitating access to their collection. Keakopa (2002) states that issues that pose challenges to archivists in the electronic age relate to the right of access to information, individual privacy, intellectual property rights, standardisation and relevant training. Eastwood (1993:458) argues that archivists need to know how information technology is applied to records keeping and to the management of records. The needs in the two areas complement each other. It is specifically the impact of information technology on records and archives management that call for cautious concentration on matters of archival theory and practice.

Garaba (2015) argues that the records managers and archivists of the future will be recruited from schools of information technology and communications in view of the fact that their operational foundations and modalities cannot be transformed as long as archivists still rely on traditional practices. The same author went further stating that, to survive in the future, archivists and records managers in the developing world need to do introspection to facilitate transformation in order to be able to remain professionally relevant in this information society. Due to inadequate skills in information technology in Africa, many traditional archivists are conservative and have anxiety in using computers (Asogwa 2011). As a result of generation gaps between the new and old professionals, computers are perceived as a threat to their status as experts. During the interviews, a public

archivist highlighted that most of the training is presented in house, by summer schools and by the Public Service Commission.

Conclusion and recommendations

This research sought to establish if digital technology has been embraced by the NAZ to encourage access to the public archives. The key problem this research sought to address was difficulties endured by archival patrons in retrieving archival records owing to the inaccessibility of adequate technologies as well as the over-reliance on obsolete systems, such as the manual finding aid systems as retrieval tools. The Szekely information operator theory was used as the theoretical framework of this study which used a qualitative research approach and adopted a case study design to address the research questions. Participants in this study were purposively selected. Data was collected using interviews, observations and document analysis. Thematic data analysis was used where themes and patterns were identified and in line with the research objectives. It was found that web-based database links for finding aids to public archives just gives an overview of the archives collection.

This study recommends that NAZ should use the International Council on Archives' Access to Memory (AtoM), which is an open source software package for a comprehensive archival description database link. The NAZ should make use of google AdWords for search engine optimisation of its website so that the institution could enhance its visibility in top five search results on search engines. As the study also found that the NAZ mainly uses email when responding to inquiries, it is recommended that NAZ also use other digital reference tools such as instant messaging, video conferencing and various social media platforms' messenger services.

Another finding was that NAZ mainly uses Facebook and Twitter as social media tools. Therefore, the study recommends that the institution also make use of other social media platforms, which include blogs, Instagram and Flickr. The NAZ should also incorporate Google AdSense to join AD banner networks with other international archival institutions to make the NAZ visible. To address the challenge of Archivists who are not well equipped with technical skills in digital technology, this study recommends that the NAZ facilitate training of archivists to acquire new skills for them to be in touch with the ever-changing technological demands.

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