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CHALLENGES AND PROSPECTS FACING THE DIGITIZATION OF HISTORICAL RECORDS FOR THEIR PRESERVATION WITHIN THE NATIONAL ARCHIVES OF ZIMBABWE

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Abstract
The National Archives of Zimbabwe Act (1986) has declared that historical records in particular must be protected against any destruction, defacing, alteration, mutilation or damage. Despite this, the pace at which digitization has been implemented by the National Archives of Zimbabwe and other memory institutions to ensure the protection and preservation of historical records and other valuable information materials, has been slack and ad-hoc. This paper will present and discuss the circumstances and challenges facing the country's National Archiving institution in embarking on digitization efforts to preserve selected public and private historical records and archives-generated public registries, memory institutions and other information centres in Zimbabwe.
Keywords: Zimbabwe, National Archives of Zimbabwe, digitization, electronic records and archives, digital preservation 1

Background to the Study

According to Gorman (2006:621) digitization has been used chiefly as a way of preservation, but it should also be looked at as a means of improving access. The sub-Saharan African region has been active in the use and implementation of digitization technology to preserve and enhance access to library and archives collections. The latest reports made by Qobo (2010) Matangira (2010) and Hamooya & Njobvu (2010) attest to the growing quest for digitization to succeed in the region.

However, Zimbabwe has yet to make a realistic declaration and committed programme to embark on a digitization programme in order to expand access and preserve the records and public archives in its custody. This is despite the fact that the National Archives of Zimbabwe Act (1986) subsection 13 has declared that historical records in particular must be protected against any destruction, defacing, alteration, mutilation or damage. Furthermore, in order to expand access to public records and archives, the reproduction of copies overcomes the constraints of traditional access that might involve geographic and economic challenges (Molawa, 2009:4). The digitized images, manuscripts or any other documents can be made available "instantly" to a vast number of people (Molawa, 2009:4).

In light of this, the pace at which digitization has been implemented by the National Archives of Zimbabwe has been rather slow compared to the regional pace-setters South Africa and more recently Zambia. Saunders (2005) noted the ALUKA and DISA projects as major digitization initiatives for the southern Africa region. Hamooya & Njobvu (2010:237) attested to digitization as an answer to preserving materials of "immense and unquestionable historical relevance" as part of the Zambian cultural heritage by increasing access and reducing the risk of gradual destruction to those record materials. To date, the broom of digitization may have swept over southern Africa but the dust still remains for historical records within the National Archives of Zimbabwe.

According to subsection 12 of the National Archives of Zimbabwe Act (1986) an historical record is any record that by reason of its enduring or historical value deserves to be preserved and is in the national interest. The mission statement of the NAZ states that it is to acquire, preserve and provide public access to Zimbabwean documentation in whatever format in an efficient and economic manner.

Therefore digitization can be one such avenue for the National Archives of Zimbabwe (NAZ) for ensuring the protection and preservation of historical records and other valuable information materials. These historical records may include various citizen records from births and deaths certificates, marriage certificates, estate records, and related citizen records and historical archives

The Zambian case study by Njobvu & Hamooya (2010:240) explained that the intellectual content, the level of demand from the public and those materials that were heavily used within their collections were criteria for selecting materials fit for digitization. The NAZ Act (1986) vests this responsibility of selecting historical records for preservation with the Minister as stated in subsection 12. Citizens may make "representations" to the Minister's

declaration after which he may confirm his decision; or reverse it and revoke the declaration. The challenge of this legislation instrument implies that selection of historical records for digitization may change with each successive appointed Minister and government, so threatening the long-term sustainability of digitization initiatives within the NAZ. A review of the legislation in light of the digitization initiatives within the region may present an opportunity for the NAZ to embark on long-term projects for the digitization of historical records.

Digitization is believed to enhance access to historical records and valuable materials within archival collections (Kleifeld, 2010:276; Njobvu & Hamooya, 2010:240). In particular, digital access is faster and more widely spread through technologies such as the Internet and within the institution storing the digitized records on a server for use through an intranet connected to the archives reading rooms. Furthermore, the production of digitized copies protects the valuable originals from accidental and general usage damage (a result of improper handling).

Contrary to the sweeping benefits of digitization Smith (1999) in Molawa (2009) argued that the expectations of increased access, cost reductions and efficiencies in preservation posed by digitization may be unrealistic and misleading and may potentially put at risk the valuable collections and services of archives and libraries. In particular, the drawbacks of digitization listed by Molawa (2009) in light of the pessimistic Smith (1999) are as follows:

Disadvantages of digitization

i. Digital conversion is moving towards replacing microfilming as the preferred medium for preservation. Reformatting could result in irreversible losses of important and irreplaceable information (Smith, 1999).

ii. Digital information is not eye-legible, but depends on a machine to decode.

iii. Smith (1999) went further to indicate that it is difficult to ascertain authenticity and integrity if an image, database or text is in digital form. This has serious ethical implications in certain academic disciplines and professional practices.

The National Archives of Zimbabwe relies on microfilming technology to achieve some of the aforementioned benefits of digitization. However, microfilming copying is particularly expensive (Roper & Millar, 1999:55). In addition, efforts to effectively protect historical records in the archival collection through microfilming have been hindered as a result of the occasional breakdown of the microfilm reader equipment and the expensive cost of replacing microfilming components which are unavailable locally. Therefore historical records on microfilm have not been readily available for use to researchers.

Standing instructions prevent the public access to records within the NAZ until after a period of 25 years and in specially identified records 40 years. This protects the historical record from research use and access that may lead to *any destruction, defacing, alteration, mutilation or damage* before they are open to the research public. Until the standing instructions are reviewed, any historical record is under safe preservation, thereafter it is by law open for access.

Finally, efforts to preserve historical records at the archival facility face an ominous future since the temperature-humidity conditions are uncontrolled after the environment air conditioner broke down almost ten years ago. The NAZ has since not been able to repair it. This exposes historical records to threats of mould, dust and discolouring which may render them unfit for public use. This is the greatest threat yet to historical records which may still suffer destruction, defacing, alteration, mutilation or damage when also made available to researchers.

Bayissa et al., (2010:3) explain that several large-scale digitization projects aim at conserving and preserving old, fragile and deteriorating documents of high scholarly value not only for preserving them but also for providing increased access and search possibilities that become possible once the documents are available in computer-processible form.

The NAZ can effectively use digitization as an access strategy to make available historical records in digital form because this fits well with the mission statement mandate. To a lesser extent (as the study will show) digitization may yet to be considered a viable strategy for the preservation of historical records in light of a strong infrastructure for microfilming. 4

Statement of the Problem

Worthwhile possibilities await the NAZ in embarking on realistic efforts to use digitization as an avenue to fulfilling its mission and vision for those historical records which by reason of national interest and/or their enduring or historical value deserve to be preserved. However, despite this directive and legislative instruction on which the NAZ so heavily depends on, digitization as a programme for the improvement of access and preservation of historical records lags behind and falls in the shadow of progress being made by regional neighbours. It would appear that the NAZ faces challenges that hinder its efforts to uptake digitization and benefit from the opportunities it raises for historical records and archives in Zimbabwe.

Objectives of the Study

The aim of the study was to uncover how far digitization had assisted in the preservation of records and archives at the National Archives of Zimbabwe. In particular, the objectives of the study were:

1. To ascertain the status of any digitization initiative, project or programme for selected historical records at the National Archives of Zimbabwe;

2. To identify the historical records at the NAZ that can benefit from a digitization programme to either enhance their access and/or preservation;

3. To establish the file formats and technologies used for the digitization of selected historical records;

4. To identify the digitization software and hardware being used by the NAZ to digitize selected historical records;

5. To examine the status of any preservation strategy or policy that may exist for digitized historical records;

6. To ascertain the skills and knowledge of records managers and archivist staff at the NAZ for effectively carrying out digitization projects or programmes;

7. To outline the issues associated with the reproduction and copyright of digitized historical records;

8. To recommend solutions and opportunities for remedy for challenges faced by the NAZ for future digitization initiatives for its historical records.

Research Questions

1. Are there any historical records at the NAZ that can benefit from a digitization programme to either enhance their access and/or preservation?

2. What criteria inform the NAZ on which historical records to digitize?

3. If digitization is being done for selected historical records, what file formats and technologies are used?

4. What digitization software and hardware is being used by the NAZ to digitize selected historical records?

5. What preservation strategy or policy exists (if any) for digitized historical records?

6. Are records managers and archivist staff at the NAZ competent with the skills and knowledge to effectively carry out a digitization programme?

7. What considerations are given for issues related to reproduction and copyright of digitized historical records?

Research Methodology

A quantitative methodology for the study on digitization at the NAZ was implemented in light of the research questions stated above. The quantitative methodology was ideal as it would bring out the status of digitization from an objective basis. Questionnaires were distributed to two main centres of the NAZ in Harare and Bulawayo for responses from key officials who were purposefully sampled for response and post-questionnaire interview. The preliminary results of the study were displayed and illustrated using conventional pie-charts and percentages.

Summary of Research Findings

1. *Are there any historical records at the NAZ that can benefit from a digitization programme to either enhance their access and/or preservation?*

i. The NAZ has major historical records in its archives collection, followed by the records centres, followed by the National Reference Library section, the illustrations section and lastly, the audio-visual records unit.

ii. Each section has various historical records selected on a basis of their enduring or historical value which make them worth preserving and because it is in the national interest that they are preserved within the National Archives of Zimbabwe.

Responses from the interviews and questionnaires showed that the following historical records have been requested by researchers for digitization.

1. Serials/journals/magazines/newspapers
2. Photographs/images

Responses also highlighted that finding aids used to retrieve historical records from the public archives had to be digitized though it was unclear if what was meant was computerisation of the index or the direct digitization of catalogue entries.

Historical Records

Records Centers

Public Archives & Research Section

Audio-visual Records Section

2. What selection criteria inform the NAZ on which historical records to digitize?

i. Currently, the major criterion that informs archivists at the NAZ on which materials that can be digitized is on the grounds of improving access and "this is carried out on a case by case basis".

ii. Currently, there is no specific digitization policy document to guide the NAZ in rolling out a digitization programme for any select series of historical records.

iii. Currently, proposals have been submitted to the funding Ministry for the purchase of the requisite digitization equipment.

3. *If digitization is being done for selected historical records, what file formats and technologies are used?*

i. Digitization of historical records is carried out by the NAZ.

ii. Digitization of photographic prints is into JPEG format is carried out on a "case by case basis". However, user may specify a file format they may desire besides JPEG.

Digitization of photographic prints is carried out from the original image formats in black and white as well as sepia tone. Conversion is made possible through a scanner.

iii. Digitization of audio-visual film records from VHS format into DVD format is carried out on "case by case basis." Conversion is made possible through a SONY VHS player PANASONIC DMR-EH59 DVD recorder.

4. What digitization software and hardware is being used by the NAZ to digitize selected historical records?

i. Currently, the NAZ uses open source software available on Windows XP operating system to carry out digitization.

ii. The computer hardware is limited for digitization, since there is only one scanner and computer available for the purpose of digitization hence microfilming continuing to take a leading role in preservation of historical records.

iii. Currently, no digitization of sound recordings is being carried out.

iv. Currently, for the VHS films that do get digitized on a "case by case basis" no compression methods or software is used.

v. Currently, no optical character recognition (OCR) software is in use.

5. Are records managers and archivist staff at the NAZ competent in the skills and knowledge to effectively carry out a digitization programme?

i. Currently, records managers and archivists involved with digitization services are qualified personnel with at least two years' experience.

ii. One respondent is a holder of an honours degree in Records and Archives Management and has benefited from an international training programme in Latvia. Other respondents are holders of Diplomas and Certificates in Library & Information Science. However, the one respondent alluded to their lack of contemporary training in the area of historical records digitization.

6. What considerations are given to issues related to the reproduction and copyright of digitized historical records?

i. Currently, digitized historical records are made available as electronic documents on-site at the NAZ at a computer workstation and not through a website, or a portal or external link or server. Users download their digitized images to a removable flash disk or a copy on DVD disc for a fee.

ii. Currently, the NAZ does allow for the digitization of copyrighted material within the statutory confines of the National Archives of Zimbabwe Act (1986), the Copyright Act (1967) and the Printed Publications Act (1975). Therefore the NAZ adheres to the copyright laws and regulations of Zimbabwe for the digitization of historical records.

7. What preservation strategy or policy exists (if any) for digitized historical records?

i. Currently, for historical records within the public archives the NAZ is vested with the copyright of the material.

ii. Currently, users of digitized historical records are warned against violating the provisions of the Copyright law where the NAZ informs users that no reproductions or copies can be made in paper, electronic or other format without the express permission of the copyright holder.

iii. Currently, there are no electronic data security management systems (such as firewalls, encryption programs or related logical security mechanisms) that may be used to control digital copying.

Recommendations

Digitization still remains the most feasible strategy for enabling access to historical records for the greater research community which now constitutes the global village. Of paramount importance for the NAZ is to train its staff in contemporary digitization technology through accredited training programmes abroad since the requisite training is unavailable locally.

The development of a digitization policy for historical records is important and must be addressed as a matter of urgency to cater for the possible preservation of deteriorating historical records that can be saved from the declining conditions in archival storage. Before the purchase of digitization equipment, microfilming equipment must be repaired and replaced with more modern reader and printing technologies such as COM that is faster and can be seamlessly integrated into a digitization programme. A possible model of strategy can follow Kleifeld (2011:277) with a hybrid workflow where microfilming and digitization are combined into a hybrid unit. The benefits of both systems can be exploited and the high resolution in microfilm in conjunction with coloured digitization resources can be of importance for the photographic collection within the illustrations unit at the NAZ.

Challenges

The NAZ has an undervalued ~~-s~~taff establishment which requires further training and exposure to modern digitization technologies. In addition, the absence of a digitization policy programme hinders any concerted efforts to see long-term digitization programmes being implemented at the NAZ. Most of the efforts to secure funding from the parent Ministry of Home Affairs have been protracted and this will stall efforts to purchase digitization software and hardware technologies. The misconception that digitization will replace paper records/microfilming technology by most members in the NAZ can result in resentment of the new technology rather than an open arms attitude towards digitization of historical records and archives.

Opportunities

International bursaries and training programmes are available for digitization and digital archiving (for example UNESCO, ICADLA and ESARBICA). The participation of the NAZ at international forums can offer opportunities for training and skills development in the area of digitization and electronic records management. In addition, the NAZ must approach the expertise of local and international consultancies that will recommend for the ideal software and hardware technologies for any future digitization programme due to the lack of depth in training and skills in digitization within the archiving institution.

The NAZ has a rich documentary, audio-visual and photographic collection of historical records that can date to as far back as the late 18th century which is of global interest to many researchers in Zimbabwe and across the world. The NAZ has a well-developed microfilming records unit which can be integrated into a digitization programme and thereby save "re-inventing the wheel" i.e. retrieving historical records over and over again for digitization requests. The resources and materials from the microfilm unit can use the Kleifeld (2010) model which combines microfilming and digitization into a hybrid solution for the preservation of historical records and archives.

To address the funding challenges the NAZ may approach affiliate Ministries such as Ministry of Information and Communication Technology for funding, rather than relying on the Ministry of Home Affairs alone or external funding bodies such as the foreign embassies of Germany, China and Sweden which have friendly relations and initiatives to Zimbabwe.

Conclusion

Indeed, digitization can succeed when collaborative efforts are realized between the National Archives of Zimbabwe and the public registries and private memory institutions creating and storing these historical records. Digitization can never successfully replace conservation (Kleifeld, 2011:278). Microfilm resources and digitization strategies should be combined for a collective achievement of objectives related to the preservation and access to historical records. Unless there is acquisition of modern digitization software and hardware technologies or the training and skills development of professionals in digitization and the adoption of digitization policy within the management of records and archives, the preservation of historical records through noble digitization projects will not be achievable in Zimbabwe.

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