

Newspaper preservation at Botswana's legal repositories

Mogogi Thabakgolo

University of Botswana, Department of
Library Services

Mogogi.thabakgolo@mopipi.ub.bw

Boemo N Jorosi

University of Botswana, Department of
Library and Information Studies

Jorosibn@mopipi.ub.bw

ABSTRACT

For centuries, newspapers have been a resource for both scholars and researchers. There is no form of publication that captures day-to-day life of a community and its citizens better than the local newspaper. As a primary source for local history and other information, all newspapers (e.g. metropolitan dailies, weeklies and ethnic press) are worthy of retention and preservation.

While great strides have been made in the science and practice of newspaper preservation since the 1830s, extant literature reveals that though the subject has generated a vast body of literature, it remains an undeveloped domain in sub-Saharan Africa, with few scholars demonstrating a keen interest on the subject. This has unfortunately limited our understanding of how records managers and archivists preserve newspapers in transitioning country contexts. The study reported here investigated the preservation of newspapers in Botswana's three national repositories: Botswana National Archives and Records Services, Botswana National Library Services and University of Botswana Library.

The Data was gathered via self-administered questionnaires. The key findings of the study were: (1) not all newspaper publishing companies were depositing copies of newspapers in accordance with the

Legal Deposit Act (2) all the 3 repositories were making efforts to preserve newspapers (3) binding emerged as the dominant mode of preservation, followed by microfilming and (4) environmental conditions in which newspapers were stored ranged from air-conditioned (controlled environment) to unregulated environments.

The study recommended that Botswana's legal repositories needed to adopt new technological measures of preservation, particularly, digitization to keep up with the developments that are taking place in the preservation sciences. Furthermore, cooperation amongst the repositories was vital to overcome some of the challenges identified.

Keywords: *Preservation, newspapers, legal repositories, Botswana, environmental conditions*

1. Introduction

Newspapers are sources of information on the social, economic and political development of a nation. They feature articles on an unlimited range of contemporary social activities; they publish investigations into the affairs of business, commerce and finance and display advertisements for all kinds of goods and services. As a resource for scholars and researchers, newspapers capture day-to-day life of communities hence they are regarded as the first draft of history (Binham 2012).

Newspapers have a heritage value. They record events as they happen hence; they fit the United Nation Educational and Scientific Cultural Organization (UNESCO) memory of the world register criteria. The Library of congress (2008) states that newspapers make a great contribution to our understanding of the world at particular time through their

recording of events as eye witness accounts. They often report about a place which made an important contribution to major development in world history or culture. Newspapers often report on the life or works of people who have made significant contribution to world history or culture as well as giving a biography on certain public figures that are considered important or associated with particular national historic events (Abalaka, Yahaya & Okikiri 2014). The various newspaper publications become the national memories that are preserved for posterity because of the informational value they carry. Moreover, newspapers value as a heritage resource lie in their ability to convey the past important information on subjects that appeal to most people in society (Abalaka, Yahaya & Okikiri 2014).

The informational value of the newspapers as stated above make them to have a wide range of users. Researchers have long employed newspapers as a unique source of information. According to the Library of Congress (2008) newspapers have a long history of being copied after their publication. For decades, even hundreds of years after their publication, researchers of all kinds, all over the world, turn to newspapers for information relating to their needs.

1.2 Statement of the problem

With few exceptions to a handful of studies (e.g. Mwiru 1999, Loubser 2003 and Ojo and Ola 2006, Asare-Kyire, Borteye & Teye 2013, Abalaka, Yahaya & Okikiri 2014) empirical research on newspaper preservation in Africa is relatively sparse. Most of the studies cited above concentrated on problems of access to newspapers and preservation challenges encountered by repositories in their respective countries. With Botswana, the legal deposit law encourages preservation of Botswana's documentary heritage. However, as for newspapers, little is known about how they

are preserved. The only study by Kufa (2000) sheds light on the subject of newspaper preservation in one of the country's esteemed repositories (UBL). No other empirical studies on Botswana were found. Consequently, little is known about how repositories in Botswana are doing to preserve newspapers therefore, this study was conducted in Botswana's legal repositories being Botswana National Archives and Records Services (BNARS), Botswana National library Services (BNLS) and University of Botswana Library (UBL) to investigate how newspapers are preserved in these repositories. Therefore the study sought to address the following questions;

- i. What measures are in place for newspaper preservation in repositories?
- ii. What environmental condition are newspapers stored in?
- iii. Are newspaper publishers depositing?
- iv. What recommendations can be adopted to ensure preservation of newspapers in legal repositories?

2. Literature Review

Environmental control, in every archival and library buildings is important. It is crucial that light, pollutants, temperature and relative humidity be monitored in any archival or library building. Environmental factors such as temperature, relative humidity, light, and atmospheric and particulate pollutants can prolong or shorten the usable life of library material. This means that we should be able to monitor temperature, relative humidity, pollutants and dust. Rooms where library or archival material is stored and shelves on which library material is kept should be properly ventilated. Air movement removes off-gassing of organic materials and prevents a build-up of pockets of high relative humidity

which can lead to outbreaks of mould (Hanus & Hanusová 2013).

Mahmood & Mari (2013) state that frequent changes/alteration in temperature and relative humidity adversely affects paper materials by weakening their structure. Light also becomes a factor in deterioration of paper materials, the effects of light will be evidenced by fading of pigments and dyestuff. Mahmood & Mari (2013) further state that serious deterioration of paper is caused by ultraviolet rays of sunlight and fluorescent lamp, which is shown by bleaching action that causes some whitening of paper and fading of colored papers and certain inks.

Beck (2011) asserts that paper deteriorates with age, and that deterioration process is expedited through fluctuations in temperatures and humidity, exposure to ultraviolet light, atmospheric pollutants, mold, and pests. The Library of Congress (2008) recommends keeping temperature below 72°F (22 degree Celsius) relative humidity of 35% as well as filtering ultra violet radiation from windows and light fixtures, keeping a buffer between materials and air pollutants. Unmonitored temperatures and relative humidity can lead to the growth of mould in collection. According Wahab, Khamidi & Jamaludin (2014) maintaining humidity level below 60% and ideal between 30-50% significantly can reduce the chance of mould growth as mould grows and spread where there is food source and moisture. Stephens, Brazier & Spence (2014) through the empirical study conducted at the British Library buttressed that temperatures in the storage void is held at a constant 14 degrees Celsius and relative humidity at 52 percent whereas oxygen levels in the newspaper storage are reduced to 14.9 % by continuously introducing nitrogen. It is evident from the literature that repositories in some countries

have taken measures to preserve their newspapers in suitable conditions.

Moyo (2000) suggest that a survey conducted by the International Council on Archives (ICA) has shown that archives in the tropics are in state of deterioration due to climatic factors, improper handling, poorly designed storage and use of untested materials. In the same vein, Asare-Kyire, Borteye & Teye (2013) conducted a study at the Ghanaian University Library revealed that in tropical climate it is difficult to achieve and maintain ideal temperature and relative humidity in Ghana where relative humidity on average can go up to 83.2 % yearly. In a survey by Ngulube (2005), it was observed that environmental control and monitoring was not a priority to many libraries and archives in the continent. Moreover, Ifijeh (2012) observed that the relatively high and fluctuating temperatures and relative humidity in eastern and western Africa countries contribute to quick deterioration of newspapers.

Newspaper clipping has been used as a method of newspaper preservation however, it has been observed by Gupta, Malviya and Srivastav (2010) that newspaper clipping constitute a preservation challenge. Newspaper clipping cut part of the newspaper subject or heading chosen by the librarian or Archivist while the rest of the paper is discarded. Hart (2006) observes that most of the time date, sources and other information are missing in newspaper clippings. The lack of dates and other information can render newspaper preserved in this format as unreliable source to scholars.

Library binders have developed techniques and technology of binding books. The use of adhesives rather than sewn in binding was and

is still a problem (Swartzburg 1995). Sewing can be expensive. Over sewing cause the thread to perforate into margin, which can affect the openability of the volume often causing it to snap shut. The paper is weakened in the binding margin because of frequent perforations of the over sewing punches and needles (Depew 1991). In binding, pages can fall off and text block breaks apart when it is forced to open (Lavendar 2001). Binding with adhesives can at times create problems as adhesives can flow between pages and stick them together. In newspapers, some text can be hidden on the binding.

Microfilm offers some advantages in terms of compactness of storage and is far more stable than newsprint however; microfilm does not provide permanent preservation. More also, it has never been popular among library and archival users than hard copies (Stocker 1999). However, Berthon & Wong (2013) posit that in the Australian Library microfilming still remains key despite their acknowledgment that digital reformatting preservation will replace microfilming. Furthermore, microfilmed newspapers are stored in good environmental conditions. .

It is difficult to obtain high quality production of images with microfilming. Similar problems on photographic images have been observed by Arlitsch and Herbert (2004). There is need for other equipment in order to read the materials. If there are no good registers or indices the film may become impossible to use. Microfilm seems to be dependent on the quality of newspaper at the time of microfilming. Arlitsch and Herbert (2004) present similar views from Utah Newspaper Preservation Program.

Digital technology provides easy access and space consideration unlike the difficulty of maintaining microfilming reading equipment. Libraries and archival institutions are faced

with technological challenges. In digital preservation, it is often difficult to ascertain the authenticity and integrity of image or text in digital forms. The California Newspaper Preservation experience shows that with digitized copies there are problems of retrieval accuracy, when the original or the filming is poor (Snyder 2007). Another observation made by Simon and Ronan (2008) on Latin Newspaper Preservation Program was that there were challenges on digitization of newspapers such as copyright issues; institutional funding and technical complexity had limited the availability of these resources. Verheusen (2007) writing on the Dutch digitization experience demonstrates that microfilm had different specifications which were not suitable for digitization. It is evident that digitization needs standards and proper mechanisms to be in place if it is to be established.

Legal deposit remains one of the most vital mechanism through which repositories acquire all documents whether print or none print. Governments across the world have shown their support for the legal deposit of print publications on the grounds of ensuring their preservation, availability and recording of the published output of the country for the benefit of the nation. One of the objectives of legal deposit is the accumulation and preservation of a national collection of library materials of all kinds (Lunn 1981). This can be achievable if the depositors take legal deposit law seriously and comply.

In Malaysia the deposit of materials show that there is still lack of compliance, the statistics provided by Edzan and Ibrahim (2004) show a fluctuating trend in the deposit. The authors assert that the government policy that encourages information technology has led to more technologically oriented publications albeit; the current statistics show that few

electronic publications are deposited with Malaysian repositories.

According to Francis and Webster-Prince (2008) some reasons for lack of depositing are lack of knowledge, ignorance of the passage of the law, some did not consider CDs and DVDs as items of library collection, inability to understand why the national library want to collect audiovisual materials and as well as whose responsibility is it to make deposit. In some countries such as Switzerland and Netherland there are no national deposit legislations but only voluntary deposits. In this situation, compliance to the international expectancy of deposit is difficult to measure and enforce. In some instances, it has been observed that the wording of the law contribute to lack of depositing as the law cannot be enforced fully as in the case of Turkey (Fenerci 2008). In some cases it is not newspaper publishers who are not depositing but repositories fail to exercise their right to claim a deposit copy.

Preservation of library materials is not an end itself, the materials has to be made accessible to library users. Asare-Kyire, Borteye & Teye (2013) have observed that the poor state in which archives are kept in is due to the absence of preservation management to ensure the posterity of archival materials. Preservation precedes access hence there is need to ensure preservation of materials before their access. Nsibirwa (2007) observed that in South Africa the legal deposit collection is at risk of being lost and is inaccessible due to lack of preservation activities and strategies as well as of lack of knowledge in preservation. Similar experiences on insufficient funds were presented by Abalaka, Yahaya & Okikiri, (2014) & Olatakun (2008). From these studies it is observable that funds determine what can

be preserved. Aside from funds, lack of personnel also affects preservation as it has been observed by Kalusopa & Zulu (2009). Lack of personnel entails lack of expertise in areas of conservation and preservation.

Chisita (2010) observes that in Zimbabwe due to the economic situation, many publishers have taken the laxity of the institutions responsible for enforcing the legal deposit act and they felt it is not worthwhile not to comply. Chitisa (2010) partly blames the National Archives of Zimbabwe's inability to publish a national bibliography and failure to update and revise the penalties as a cause that instilled a sense of irresponsibility on the publishers. Liebetrau (2010) asserts that with the new initiative called Digital Innovation South Africa (DISA), South African newspapers are being digitalized for preservation and this increases access. The University of Zimbabwe and other major national libraries abandoned preservation of national newspapers because of lack of funds. Newspapers are given secondary status as there are other basic needs to be met. Furthermore, Tasikani (2009) points out that some old newspapers have been shredded due to lack of storage space.

Preservation of documentary heritage materials in Botswana has been envisaged in Botswana National Archives and Records Services Act (2007) and Botswana National Library Service Act (1978). Kufa (2000) conducted a study on press cutting at the University of Botswana and author observed that in an attempt to preserve newspapers, University of Botswana conducted a pilot project to preserve newspapers through press cuttings. As a form of preservation, press clippings do not offer long term preservation. This is because press cuttings are made on particular subjects while the bulk of the newspapers are discarded.

3. Research Methodology

In order to gather data for the study, a quantitative approach involving the questionnaire was chosen as the most suitable method. Many scholars on research methodology (e.g. Bhattacharjee 2012, Saunders, Lewis and Thornhills 2012, and Govenda *et al.*, 2014), have noted that the questionnaire has been used extensively in social science research because (1) it is efficient and economical, (2) permits gathering macro-level data and (3) is less intrusive and grants respondents anonymity. We specifically designed and pilot tested a questionnaire for this study targeting a purposive sample of 20 participants. According to Bless, Smith and Kagee (2006), purposive sampling picks a small number of cases that yield the most information. Creswell (2014:228) sums it up this way: 'when using purposive sampling, one has to pick individuals on site to understand the central phenomenon'. A total of 20 questionnaires were distributed to respondents who were involved in newspaper preservation and microfilming or preservation issues on a daily basis. The questionnaire method used both closed and open ended questions; the closed questionnaires used semantic differential e.g. average, good or bad and binary scale rating (yes or no) to rate respondent's understanding of preservation issues. Semantic differential connect to respondent's feelings or opinions (Bhattacharjee 2012, Torija, Ruiz & Ramos-Ridao 2013). The questions were formulated by the researchers so as to ask relevant

questions that are in line with study research questions. In data analysis because of the small number of the questionnaire the data was processed through Microsoft word for graphic presentation.

4. Findings and discussions of the study

A total of 20 questionnaires were distributed to respondents who were involved in newspaper preservation and microfilming or preservation issues on a daily basis. Of the 20 questionnaires administered, 13 were completed and returned while 7 were not, resulting in a response rate of 65%. According to Babbie and Motoun (2001) and Saunders, Lewis and Thornhill (2012), in research, a 50% response rate is adequate for analysis while 65% is considered good. As such, the response rate in this study is beyond what is deemed to be a good response rate.

4.1 Newspaper preservation measures in Botswana legal repositories

The research question sought to establish the methods that were used by Botswana legal repositories to preserve newspapers. The bar graph below presents a graphic representation of answers to this question from all repositories.

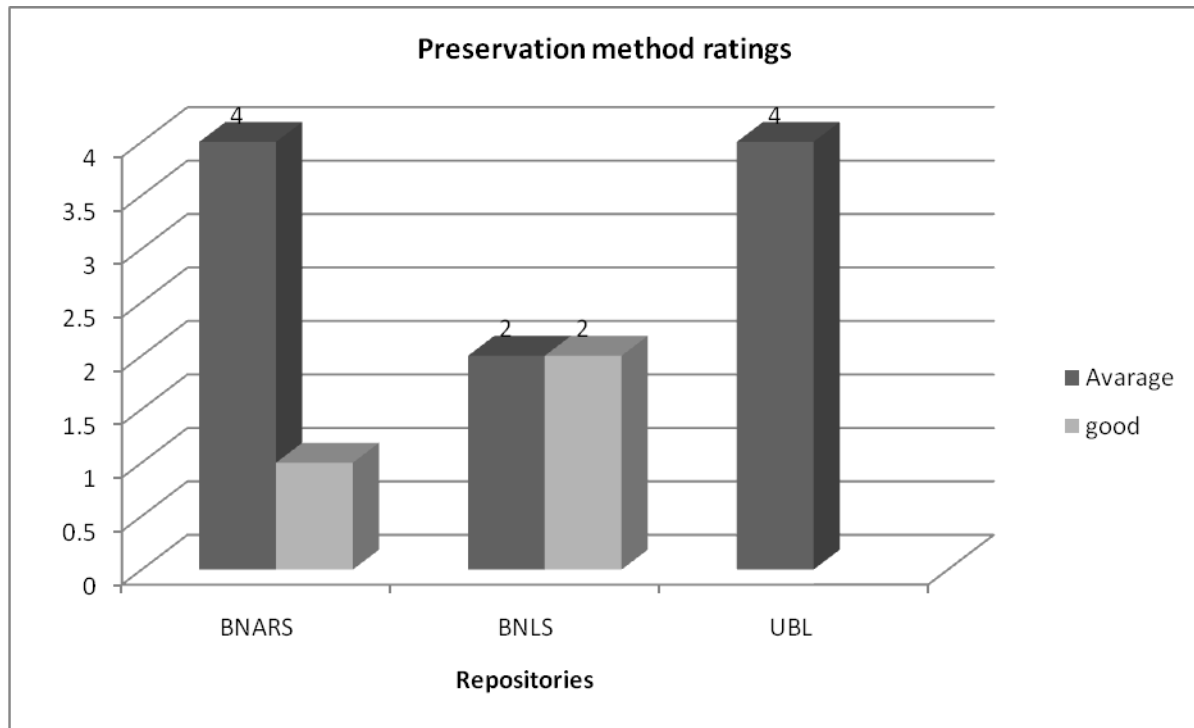


Figure 1. Responses on preservation method rating

Respondents were asked to rate preservation methods used in their repository. Responses were rated using semantic differential average, bad and good. Of these, four respondents from BNARS rated their preservation method as average while only one rated it good. At BNLS two indicated that the preservation methods employed in their repository is average while the other two said it was good. Altogether, ten respondents had shown that the method of preservation is average while three had indicated that it was good.

The study found out that all repositories bound and microfilmed their newspapers. In all repositories, ten respondents did not rate binding as the most preferred form of preservation however, it seemed as if it is the option available to them. Six respondents indicated that they microfilmed and bound

their newspapers. Similar results were reported by Mwiru (1999) who found out that binding and microfilming were the most affordable methods of preservation in Tanzanian libraries. Although binding was done across all repositories, it was only at Botswana National Archives and Records Services (BNARS) that combination of microfilming and binding methods were applied. Even though binding is major preservation method in all these repositories the study found out that the service is outsourced in all repositories.

Despite the shortcomings of binding as discussed by DePew (1991), that when the letters are close to the sewing it is difficult to read them, as the author attributes this to reduced inner margin or gutter that conceals the text. Moreover, as the needle hits repeatedly it tears and wears the paper. In spite of all these shortcomings, repositories seemed

to have no choice at the moment but work with what is available. The authors could not pick any programme or efforts by these repositories to adopt new innovations that are used in the preservation science, except at University of Botswana Library where there was a proposed programme for digitization.

The findings of the study indicated that BNARS is the only repository that microfilmed its newspapers mainly to provide backup copies and to increase copies available for use. Two copies are produced and stored separately; one copy is stored offsite at the Francistown Records Centre and the other copy and the original are stored at BNARS headquarters (Gaborone) for use and storage.

All in all, the findings of the study show that preservation efforts in Botswana fall far way behind compared to current trends in newspaper preservation. In a bid to move with current trends in newspaper preservation several countries are conducting national digitization programmes. In the United States of America the Vermont Digital Newspaper Project and the National Digital Programme (McMurdo & MacLennan 2013). Similar efforts had been made in the British Library where more than 750 million pages had been digitized (Stephens, Brazier & Spence 2014). Most repositories are adopting digitalization

as to preserve as well as provide long term access. The international preservation efforts today are moving towards digitization of newspapers. In most African countries, reformatting strategies in the form of digitization and microfilming are lagging behind because of resource limitations. This is reiterated by Kemoni, Kiplang'at and Wamokuya (2003) as they observed that there is none utilization of ICT in most of African archival institutions. However, South Africa remains as an exception as newspapers had been digitized through the Digital Innovation South Africa (DISA). The advantage of digitization as a preservation strategy and its ability to allow wider access to newspapers has compelled the international community to shift from conventional methods of preservation.

4:2 Depositing of newspapers by newspaper publishers

The legal deposit law requires publishers to deposit a copy of their publication to repositories. Respondents were asked whether newspaper publishers are depositing to ascertain the compliance with the legal deposit law. The bar graph below indicates frequency of answers on newspaper deposit.

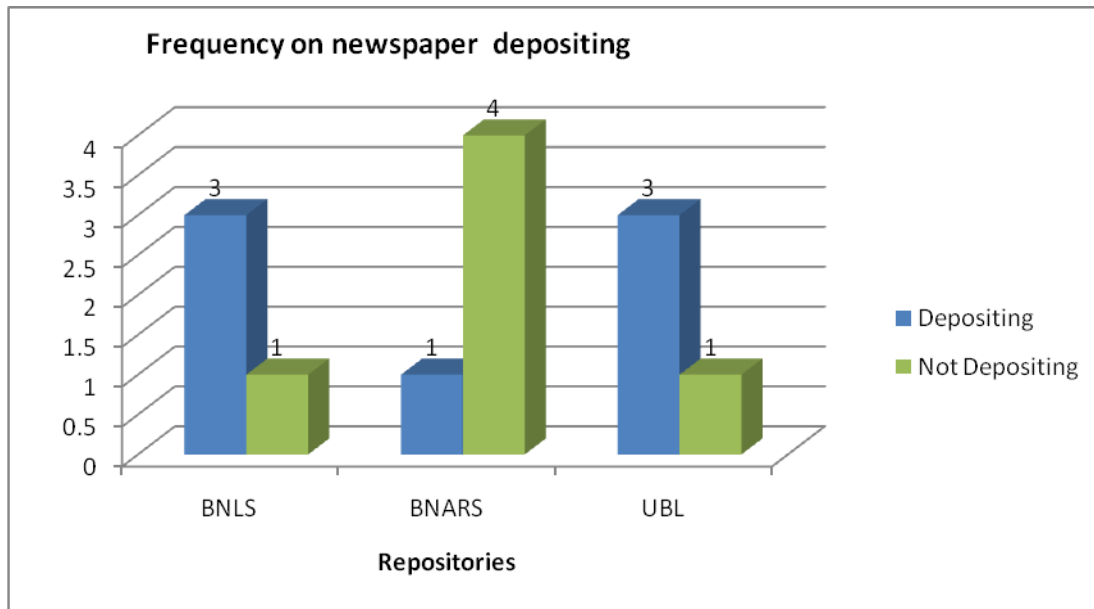


Figure 2. Frequencies on newspaper depositing

The responses presented in this study indicated that seven respondents were of the view that newspapers were being deposited in Botswana legal repositories while six respondents claimed that newspaper publishers were not depositing. From the responses given in the questionnaire we can argue that not all newspaper publishers were depositing. The data revealed slight variance in percentages with a difference of 8%, the deviating group of six respondents may be an indication that there were inadequacies in newspapers depositing.

To ascertain the consistency of depositing, the respondents were asked whether there are gaps in their newspaper collection. At the BNLS, three responses confirmed that there are gaps in the collection while one indicated that there are no gaps. At BNARS five respondents indicated that there are gaps in the collection. At UBL four respondents acknowledged that there were gaps in the newspaper collection.

The findings show that 11 respondents were aware of the gaps in their collections. Only two were not aware of the gaps in their newspaper collection. The study having established the existence of gaps could not quickly attribute it to lack of deposit. The establishment of gaps by this study indicated inconsistency in the accumulation of the newspapers at Botswana legal repositories. The results may be used to question the preservation management of newspapers at these legal repositories.

It was evident from the responses that depositing of newspapers was not satisfactory in Botswana legal repositories. The findings of the study indicated that not all newspaper publishers were adhering to the legal deposit law. From the data, this can be summed as a twofold problem; lack of awareness of legal deposit law by newspaper publishers and failure by repositories to exercise their legal right to claim a copy rather than wait for the

publishers to bring the copy to their door step.

The state of depositing seems voluntary though there is the deposit law. Although the findings show non-compliance, repositories have resorted to buying newspapers to avoid losing these information resources. The results of the study present Botswana as no exception from most of other African countries, where publishers are not able to deposit with their repositories. Though the study focused on newspaper depositing, these findings may also be a window into the whole situation of depositing library and archival materials in Botswana. Similar studies on general depositing of library and archival materials by Letshele & Lor (2002); Lajeunesse and Sène (2004), Tibane (2005) and Penzhorn (2007) have yielded similar results on depositing of library materials in general.

Nonetheless the findings of the study showed that the repositories were not making follow ups with newspaper publishers to exercise their legal right to claim a deposit copy. Similar results were reported by Hamilton (1991) on inability of the Scottish and Wales library to claim a copy of newspaper deposit. The fact that Botswana's legal repositories have resorted to buying newspapers where the deposit copy is not forth coming can exacerbate the problem of legal deposit copy.

4.3 Environmental conditions in Repositories

The findings of the study indicated that at UBL four respondents were of the view that the UBL keeps newspapers in air conditioned system which is centrally controlled while one respondent was unable to complete the

question due to limited knowledge on preservation. At BNLS the four respondents indicated that BNLS did not keep newspapers in controlled environment. At BNARS five respondents pointed out that newspaper were preserved in an air conditioned environment. The findings showed that nine respondents indicated that newspapers were stored in air conditioned system while four said that they were not preserved in air conditioned environment.

The respondents were further asked to rate temperature and relative humidity in terms of fluctuation and consistency. All the four respondents at BNLS indicated that temperature and relative humidity were fluctuating. At UBL, the three respondents pointed out that temperature and relative humidity were fluctuated whereas one respondent said they were constant. At BNARS four respondents indicated that the temperatures fluctuate while one respondent indicated that it was constant. All in all, 11 respondents have shown that temperature and relative humidity fluctuate while two had indicated that temperatures were constant.

Furthermore, the questionnaire responses indicated that 11 respondents had shown that temperature and relative humidity fluctuate while two had indicated that temperature was constant. The study indicated that repositories had made efforts in providing better storage facilities for newspapers with four respondents representing a single repository (BNLS) lagging behind in provision of relevant conditions for newspapers.

In order to determine how light as an environmental factor in repositories affect newspaper preservation, respondents were asked how long are materials exposed to light? This question elicited various answers, seven respondents indicated that materials were

exposed to light during working hours, three indicated that they were exposed to light 24 hours while another three indicated that it will depend on the retrievals of the day. The different responses showed that repositories did not have proper procedure on how long can newspapers or materials can be exposed to light. The study found out that the worst scenario being materials exposed to light for 24 hours. The exposure of newspapers to light during eight working hours indicated that materials were exposed to light for long periods. In all repositories, respondents said that they did not take light level reading because they had never considered light as a concern. However, Ogden (2004) has cautioned that the effects of fluorescent light are cumulative. The longer the materials are exposed to light the higher the possibility of deterioration. This means that newspapers in these repositories are likely to show signs of heat effects with time. On the whole the study found out that the effects of light in repositories were taken less serious because most repositories did not consider light as a concern as it goes unchecked in all repositories. A similar study conducted by Ngulube (2005) elicited similar findings that archives and libraries in the ESARBICA region do not consider light exposure to materials as a concern. The author further, stresses the point that materials should have minimal exposure to light.

Overall, the study found out that there were efforts by repositories to preserve newspapers under controlled environment. In two repositories (UBL and BNARS), there were mechanisms that have been installed to control environmental conditions within the repositories. However, at the BNLS the building was not preservation purposed-built building. A common problem that cut across the repositories was the inability of the repositories to take light level readings. The

study found out that, it was difficult to account for how long newspapers are exposed to light. Worse still, BNLS did not even have the light level measuring instrument. Respondents also indicated that they do not consider light as a threat.

5. Conclusion

The study set out to investigate preservation methods used to preserve newspapers in Botswana legal repositories. The study revealed that only two preservation methods were used for newspaper preservation, namely binding and microfilming. The binding of newspapers was the main preservation method employed in all repositories while microfilming was employed at BNARS only. UBL and BNLS were limited to binding and while BNARS combined binding and microfilming to preserve newspapers. The study also examined environmental conditions in which newspapers were preserved in, the findings showed that conditions in which newspapers were preserved were satisfactory for their preservation especially at BNARS and UBL. Nonetheless, the study also found that one repository (BNLS) was still facing preservation challenges in providing proper environmental conditions for newspapers. There was still more that could be done to move from average preservation which is presented in the questionnaire findings.

The study also revealed that not all newspaper publishers were depositing their newspaper publications. This suggested that repositories were not able to preserve all these national heritage resources. In addition the loss of these heritage resources due to lack of deposit affects information that will be available for future researchers. The lack of compliance with the Legal Deposit Act may point to weakness in the law itself. According to

Tibane (2005), legal deposit enables a country to record everything that it has published in compliance with the UNESCO/IFLA Programme of Universal Bibliographic Control (UBC). The lack of deposit means repositories are failing to meet international standards.

6. Recommendations

As it emerged from the study, legal deposit repositories in Botswana are using binding as the main preservation method, there is need to change this situation and introduce a preservation method that will meet today's technological development. The repositories need to consider digitizing their newspaper holdings. Digitization of has been carried out in the United States (Mcmurdo & Maclennan 2013) as well as in South Africa through the Digital Innovation South Africa (DISA) (Liebetau 2010). The digitization process will save repositories problems of storage or shelve spacing as the problem that repositories are facing. Consequently, this will spare the repositories the concern of putting up environmental conditions that are required by newsprint. In Addition, the digitization process will ensure a wider access of newspaper that is not limited to space.

As it came out of the study that there was non-compliance with legal deposit law, this study recommends that this be tackled by involvement of different stakeholders. This means all affected party must come together and form consensus on the right procedures for depositing newspapers. There must be a working legal deposit committee that will foresee the implementation of the law (Tibane 2005). The implementation of legal deposit through legal deposit committee has been practiced in some countries e.g. Britain and

South Africa (Letshela and Lor 2002). Furthermore, repositories should formulate strategies that can encourage depositing such a system may include rewards and also that can promote the publisher.

Given the deplorable state of newspapers in Botswana, a concerted effort is required by legal repositories. Repositories should consider cooperation in various areas as an effort to preserve newspapers. As the study has revealed all repositories have their peculiar challenges. The cooperation can assist in areas where repositories have gaps in their collections; in such cases patrons can be referred to another repository where the copy is available. This will allow staff to answer newspaper user queries. The microfilming can be conducted in one repository and make the copies available to other repositories. The cooperation of these repositories can help in harnessing the available limited resources and propel repositories to greater development.

References

- Abalaka, B. F., Yahaya, D. & Okikiri, M. N. 2014. Acquisition and Preservation of Newspapers and Magazines in Dr. Aliyu Obaje Library, Kogi State University Anyigba. *J Hum Ecol*, 45, 251-255.
- Arlitsch, K. & Herbert, J. 2004. Microfilm, paper, and OCR: Issues in newspaper digitization. the Utah digital newspapers program. *Microform & Imaging Review*, 33, 59-67.
- Asare-Kyire, A. D., Borteye, E. M. & Teye, V. 2013. Problems Associated with Newspaper Management in a Ghanaian University Library. *Library Philosophy & Practice*

- Battacherjee, A. (2012) Social science research: principles, methods and practices. Florida, University of Florida.
- Beck, T. 2011. *Book preservation manual*. Viewed 15 March 2015, <http://www.tombeck.me/portfolio/files/preservationmanual.pdf>.
- Berthon, H., & Wong, W. (2013). *Facing the future of Australian newspapers*. Paper presented at the Future Libraries: Infinite Possibilities Singapore. <http://library.ifla.org/234/1/153-berthon-en.pdf>
- Bingham, A. (2012). Ignoring the first draft of history? Searching for the popular press in studies of twentieth-century Britain. *Media History*, 18(3-4), 311-326.
- Bless, C., Smith, H, C. and Kagee, A. 2006. *Fundamentals of social research methods: an African perspective*, 2nd ed, Juta & Co.Ltd. Cape Town, South Africa.
- Creswell, J. W. (2014). *Educational research : planning, conducting, and evaluating quantitative and qualitative research*: 4th ed. Upper Saddle River, N.J. : Merrill
- Depew, J. N. 1991. *A library media and archival preservation handbook*, Abc-Clio, California, USA.
- Edzan, N & Ibrahim, S. 2004. Legal deposit of electronic publications in Malaysia: 1988-2000. *Malaysian Journal of Library & Information Science*, 9, 63-78.
- Fenerci, T. 2008. Historical development of legal deposit system in Turkey. *Government Information Quarterly*, 25, 491-503
- Fleming, P. & Spence, P. 2008. The British Library newspaper collection: long term storage, preservation and access. *Liber Quarterly*, 18, 377-39
- Francis, V, and Webster-Prince, M, 2008, 'The case of the National Library of Jamaica in implementing and administering the legal deposit of audiovisual and multimedia materials', In *Audiovisual and multimedia, copyright and other legal matters, national libraries and bibliography 10-14 August 2008*, IFLA, Québec, Canada, viewed 17 March 2011, <http://archive.ifla.org/IV/ifla64/095-114e.htm>
- Govender, I., Mabuza, L. H., Ogunbanjo, G. A., & Mash, B. (2014). African primary care research : performing surveys using questionnaires : original research. *African Primary Health Care and Family Medicine*(1), 1. doi: 10.4102/phcfm.v6i1.589
- Gupta, K. R. Malviya, V.& Srivastav, .N K. 2010. *Protection & preservation of library newspaper*, viewed 20 March 2011, http://www.ignca.nic.in/ifla2010/IFLA_A_PDF/IFLA_Poster_papers.pdf.
- Hamilton, G, 1991 'Newspaper preservation and access: developments and possibilities', *Emerald*, vol. 20, no 2, pp.1-6.
- Hanus, J. & Hanusová, E. 2013. *Some technical problems of archives and libraries: preservation and storage of documents*. Viewed 15 March 2015,

- http://www.pokarh-mb.si/uploaded/datoteke/Radenci/Radenci2013/20_Hanus_Hanusova_2013.pdf.
- Hart, L. 2006. 'Managing collections of newspaper clipping', In International newspaper librarianship for the 21st century, eds H, Walravens, IFLA publications, Munchen: K.G Saur
- Ifijeh, G. (2012). Newspaper preservation in developing countries: Issues and strategies for Intervention, *Preserving local writers, genealogy, photographs, newspapers, and related materials* (pp. 63-72):Scarecrow Press, Inc Lanham, USA.
- Katundu, D. R. 2001. Preservation Challenges for Africa's Information Systems: the case of electronic records. *Information development*, 17, 179-183.
- Kemoni, H. N., Wamukoya, J. & Kiplang'at, J. 2003. Obstacles to utilization of information held by archival institutions: a review of literature. *Records Management Journal*, 13, 38-42.
- Kufa, J. 2000. Press cuttings in the University of Botswana Library. *Library Review*, 49, 243-247.
- Lajeunesse, M. & Sène, H. 2004. Legislation for library and information services in French-speaking Africa revisited. *The International Information & Library Review*, 36, 367-380.
- Lavendar, K, 2001, *Book repair*, 2nd eds, Neal schuman publishers, New York, USA.
- Letshela, P. Z. & Lor, P. J. 2002. Implementing legal deposit of electronic publications in Africa: progress report from South Africa and Namibia. *68th IFLA Council and General Conference August 18-24, 2002*. Glasgow: IFLA.
- Library of Congress, 2008. *preserving newspapers*, viewed, 20 March 2010, <http://www.loc.gov/preserv/care/newspap.html>
- Liebetrau, P. 2010. 'Newspaper Digitization in South Africa',. *Digital preservation and access to news and views*, India, 25th -28 February, 2010. Indira Gandhi National Centre for the Arts, New Delhi
- Loubser, J, 2006, 'Preserving newspapers in Namibia', In *Libraries for the future: progress, development and partnerships 19-23 August 2007*, Durban, South Africa, eds E Por and H Walravens, IFLA publication, Berlin, pp. 153-165
- Lunn, J. 1981. *Guidelines for legal deposit legislation*, United Nations Educational, Scientific and Cultural Organization, General Information Programme and UNISIST.
- Nsibirwa, Z, B, 2007, *Preservation of and access to legal deposit materials at the Msunduzi Municipal Library*, Pietermaritzburg, South Africa, Master of Information Studies. thesis, University of Kwazulu-Natal.
- Mahmood, Z. U. & Mari, H. M. 2013. Deterioration of Library Resources and its Causes: Theoretical Review. *International Journal of Basic and Applied Science*, 1, 773.
- McMurdo, T., & MacLennan, B. (2013). The Vermont Digital Newspaper Project and the National Digital Newspaper Program. *Library Resources & Technical Services*, 57(3), 148-163.

- Moyo, C. 2000., 'Preservation and conservation of archival materials in the Eastern and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) region'. *ESARBICA Journal*, 15, 22-36.
- Mwiru, P. A. 1999. Newspaper Information in Tanzania: challenges for the 21st Century. *Information development*, 15, 160-166.
- Ngulube, P. 2009. *Preservation and access to public records and archives in South Africa*, Lambert Academic Publishing AG & Co. KG, Germany
- Ogden, B. 2004. *Collection preservation in library building design*, viewed 23 January 2011, Available at: <http://librisdesign.org/docs/CollectionPreservation.pdf>.
- Olatokun, W. M. 2008. A Survey of Preservation and Conservation Practices and Techniques in Nigerian University Libraries. *LIBRES: Library & Information Science Research Electronic Journal*, 18.
- Olsson, L, 2006, 'Newspapers in the royal library, Stockholm', In E Por and H Walravens (eds) *Libraries for the future: progress, development and partnerships 19-23 August 2007*, Durban, South Africa, , IFLA publication, Berlin, pp. 153-165
- Penzhorn, C 2007, *The implementation, monitoring and management of effective legal deposit system for South Africa*. Phd thesis, University of Pretoria.
- Saunders, M., Lewis, P. and Thornhills, A. (2012). Research methods for business students. 6th edition. Person Education, Edinburgh.
- Simon, J. & Ronan, L. (2008) Preservation and digitization of Latin American newspapers in the United States. *Newspapers collection management: printed and digital challenges/La gestión de colecciones de periódicos: desafíos en impresos y digitales: Proceedings of the International Newspaper Conference, Santiago de Chile, April 3-5, 2008*. Walter de Gruyter, 321
- Snyder, H, 2007, 'The California newspaper project: canvassing, cataloguing, preservation, digitization', in *Newspaper collection management: printed and digital challenges*, in E, Por and H, Walravens (eds), Berlin, Germany, pp. 207-215
- Stephens, A., Brazier, C., & Spence, P. (2014). A case study in national library innovation: Newspapers in the British Library. *IFLA Journal*, 40(3), 206-212. doi: 10.1177/0340035214546822
- Stoker, D. 1999. Should newspaper preservation be a lottery. *Journal of Librarianship and Information Science*, 31, 131-134.
- Swartzburg, S, G, 1995, *Preserving library materials: a manual*, Lanham, Md.: Scarecrow
- Tibane, S, 2005, *Problems and constraints experienced by publishers concerning legal deposit in Kwazulu-Natal*, MIS thesis, University of Kwazulu Natal.
- Torija, A. J., Ruiz, D. P. & Ramos-Ridao, A. 2013. Application of a methodology for categorizing and differentiating

- urban soundscapes using acoustical descriptors and semantic-differential attributes. *The Journal of the Acoustical Society of America*, 134, 791-802.
- Verheusen, A, 2007, *Newspaper digitization in the Netherlands the Dutch digital databank for newspapers and other initiatives*, viewed 10 December 2010, <http://infolib.bernama.com/equip-bernama/images/>.
- Wahab, S. N. A., Khamidi, M., & Jamaludin, N. (2014). *Assessment of Mould Growth for Library Building in Tropical Climates*. Paper presented at the MATEC Web of Conferences.
- Woodson, D, C 2007, 'Ipsissima verba: the Future of Newspaper Preservation in an Age of Epidemic URLitis', *Libraries for the future: progress, development and partnerships 19-23 August 2007*, Durban, South Africa, viewed 7 March 2011, <http://archive.ifla.org/IV/ifla73/papers/103-Woodson-en.pdf>.