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Building the South African Nation through Legal Deposit: The Impact of Legislation on Preservation of Digital Materials

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Abstract

The legal deposit of and preservation of digital materials depends on the proper legislative framework and implementation of the Legal Deposit Act. This article examines the challenges related to legal instruments affecting the legal deposit of digital materials in South Africa. Two main objectives of the study upon which this article is based were to find out the systems in place to help collect and ensure long term accessibility to print and electronic publications. This included the examination of the legislative regulatory and policy framework relating to preservation and access to legal deposit materials. The different legislations reviewed included the Legal Deposit Act No. 54 of 1997, copyright laws, the Promotion of Access to Information Act No 2, 2000 and the current Protection of State Information Bill of South Africa. Four legal deposit libraries and three Official Publications Depositories (OPDs) were the units of analysis, with a population of 17 staff directly involved with legal deposit. The survey revealed that though the South African Legal Deposit Act covers electronic materials, majority of the depositories did not have policies to manage or collect these types of materials. The greatest challenge that comes with collecting and preserving electronic materials are the multifaceted issues regarding legislation, as well as the preservation of technology used to create, store and access these records in comparison with paper.

Keywords:
Legal Deposit, Digital Materials, Preservation, South Africa, Legal Framework, Cultural Heritage

Introduction

The development of technology has fostered new and faster ways of publishing electronically but many countries are losing a significant proportion of their cultural heritage because they are unable to capture and preserve these electronic documents for posterity. The problems associated with the collection and control of electronic materials, with the lack of a comprehensive legal deposit model, have made the drafting of suitable legislation both problematic and extremely slow (National Library of Australia, 2003). The rate of change, the amount of digital material being published and the diversity of digital technology and culture overwhelm the possibility of applying the same level of human intervention as with analog materials (Feather, 2004; Smith, 2004a; Mason, 2007; Besek, 2008). Smith (2004a) asks "how are we expected to bound or fix an information object for preservation if it has no clear boundaries and is dynamic – appearing in many versions, often simultaneously, as it is on the Web?" This loss of cultural heritage is due to a number of factors including: the need to rewrite or amend legislation, a lack of knowledge, the nature of electronic documents, technical expertise and funding, as well as the fast rate at which technology becomes obsolete.

Research Questions

This paper is based on three research questions that include:

- What systems are in place to help collect electronic publications?
- What means and processes are used to help make materials accessible?
- What systems are in place to ensure electronic publications will be accessible, especially in the long term?

Preservation and Access

Digital preservation is defined by van der Merwe and van Deventer (2009) as: the processes and actions that will help to ensure continued and indefinite access to information and records that exist in a digital format even when the digital files are taken out of their creation context.

The greatest challenges that come with electronic publishing is the complex issues regarding the preservation of technology used to create, store and access these records in comparison with stable paper. The stability of electronic records is at a far greater risk including loss of materials, reliability and authenticity, security than paper records. Wilson (2004) emphasises that the "preservation of digital information is the retention of the electronic information, while access to digital information is the ability to retrieve, comprehend, and use digital resources." The reason for the preservation of all legal deposit materials is to be able to access these documents in the future. The concerns surrounding preservation and access are that as technology changes, software and hardware become obsolete and are replaced. Harvey (2005) states that there is a need to store the digital publications bit streams, the means to process them, the devices that allow us to access them, as well as the contextual information to ensure integrity and authenticity. Yet, there is lack of standard hardware and software, the fast pace of technological obsolescence and many points in an electronic documents life where its integrity can be compromised.

Legislation

Apart from the nature of electronic documents, volume of materials produced within a short space of time, lack of skills and funding, legislation issues associated with collecting and preserving, as well as accessing electronic information also present obstacles. There are already well established legally recognised frameworks for print materials, for example, copyright permits a level of copying for preservation purposes (Harvey, 2005). According to Kavcic-Colic (2003) "technological developments have changed the concepts of publication, reproduction and distribution." Yet, legislation has not changed at the rate of which technology is developing.

Legal Deposit Legislation

Due to a tremendous increase in electronic publications, many countries are revising or have revised their legislation. According to Larivière (2000), a number of jurisdictions since 1990 have rewritten their legal deposit laws including Germany, Norway, Indonesia, France, Sweden, Canada and South Africa. To date, many more have modified their deposit laws like Britain in 2003, and others are in the process of doing so. Although South Africa and a number of countries have included digital materials in their legal deposit legislation it can take several years for it to be fully effective. Verheul (2006) states that: 'Increasingly, material is being published in digital form: this material also needs to be collected and preserved to ensure a complete record of a nation's published material. Legal deposit legislation, therefore requires a new legal framework in order to encompass digital publications. The complications associated with the collection and control of electronic materials, together with the lack of a comprehensive model, have made drafting appropriate legislation problematic and slow.

There is a definitive lack of literature detailing the processes and activities concerned with practically implementing legal deposit for electronic material (Penzhorn, 2007). However, a few are collecting some online publications namely: Sweden, Denmark, France, Australia, Netherlands and the United States of America. Others are paving the way to start collecting electronic documents, such as Britain.

Although South Africa is amongst the first countries to include electronic publications in their legal deposit legislation in the world, it is still wrestling with the concept of electronic/digital legal deposit. The Act makes provision for a Legal Deposit Committee which is responsible for implementation of the Act by making recommendations to the

Minister of Arts and Culture with regard to regulations. These regulations help develop policies which set frameworks and standards that are vital to achieve the preservation goal. The Legal Deposit Committee has not made any recommendations to the Minister with regard to regulations for the deposit of digital materials (Mpholefole, 2012). However, the Legal Deposit Committee has responded to a call for help with the Cultural Laws Third Amendment Bill with regard to legal deposit (Mpholefole, 2012).

Lack of revised deposit laws and the ability of institutions to implement these laws lead to crucial documents being lost. Britain revised their Act in 2003 to include electronic materials; despite the fact that the Act does not stipulate how it should be implemented, they have created secondary regulations to do so (Milne and Tuck, 2008; Gibby and Green, 2008). Britain has a Legal Deposit Advisory Panel that is an independent, non-departmental public body. This body has drafted regulations for the implementation of digital materials and put them forward to the British public to assess (British Department for Culture, Media and Sport, 2010). Comparatively, South Africa lacks human resources as well as a strong institution to implement the Legal Deposit Act competently.

Copyright

South Africa is making efforts to collect online publications. However, legal deposit of dynamic electronic publications that are only available online raises serious issues with copyright, authentication and preservation (Larivière, 2000). Depending on the preservation strategy adopted, the acquisition, storage and preservation of electronic documents over time involves repeated acts of copying (Muir, 2004). Yet, generally, the current legal deposit and copyright law is unclear regarding the preservation roles and methods for electronic materials. Muir (2004) emphasises that the copyright issues that arise depend on the scope of copyright legislation and the nature of the material. There may be conflicts between what copyright allows preserving institutions to do and what library and archive laws require them to do.

Valberg (2008) states that "it is important that the wording of the Act is in accordance with the authorities' policy and the rapid changes in society." Selections made of what to preserve need to be outlined in the legislation clearly and amended regularly according to the developments in technology. On the other hand, legislation (Intellectual property rights- copyright) involving restrictive mechanisms can bar the preservationists from collecting and preserving electronic documents (Day, 2006; Wilson, 2004). These issues may be overcome by careful structuring of the legal deposit laws allowing depositories rights to software licenses. Larivière (2000) states that "copyright gives an author the exclusive right to authorise the reproduction and dissemination of a work" with the exception that the permission is granted through legislation or licence.

A few countries in Europe and America have developed copyright laws for digital materials. In the United States of America, the Digital Millennium Copyright Act permits certain institutions to make a maximum of three digital preservation copies (Muir, 2004; Harvey, 2005). However, Besek et al. (2008) state that the three copies are inadequate for digital preservation for posterity. Other initiatives include the Canadian Copyright Act, European Union Directives on the Aspects of Copyright and World Intellectual Property Organisation (Muir, 2004; Moorthy, 2006). Some countries have data protection rights (Harvey, 2005). The rights to preservation of digital materials are complicated and are time-consuming to implement in that currently libraries and archives have to ask the right holders for permission to preserve digital documents. This is due to the fact that deposit for digital publications has not yet been fully implemented, and arrangements of this nature have been made for web material in Australia; e-theses/research papers in Austria and Germany; online material and university output in Switzerland; and on dissertations in America (Verheul, 2006; Harvey, 2005).

Besek et al. (2008) found another barrier to digital preservation as the dilemma with 'orphan works' that is the works of owners who cannot be identified. This includes digital materials created by collectively using Web 2.0 tools like Wikis. Muir (2004) emphasises that complex digital material, such as multimedia, depends on particular software to function and needs different software to enable searching and retrieval. It also contains different elements belonging to different individuals/ organisations.

Copyright affects preservation as well as access to digital publications. This is due to the fact that technology has changed the way information is produced, distributed and reproduced. All digital materials are subject to copyright, including information on the World Wide Web. Kavcic-Colic (2003) and Larivière (2000) stress that anyone collecting these materials without the author's permission is breaking copyright law, with the exception for documents in the public domain. Other exceptions include all publications that are clearly marked to state that duplication is permitted, and when digital preservation is done with the permission of the owner (Besek et al., 2008). Publishers on the Web also use technological protection measures like login procedures to control access to digital material. Masango (2007) states that "digital content is increasingly protected by multiple layers of intertwined legal and technological devices – copyright law, licensing agreements, software and hardware management systems and criminalising anti-circumvention laws.".However, Besek et al. (2008) state that these measures can be barred by law, while Besek et al. (2008) and Masango (2007) are of the view that a number of countries including the United States of America, Australia and the United Kingdom have clauses protecting these contractual agreements which override legislative provisions in most circumstances.

Wilson (2004) emphasises that "one of the foremost pieces of legislation barring libraries from actively archiving digital resources, especially electronic journals, is copyright." With the off-line electronic materials, the procedures for depositing are similar to those for print material. With on-line material, the publisher may send directly to the depository or the depository would have to download it causing serious copyright questions since downloading is reproduction (IFLA, 2000). IFLA (2000) insists that "with copyright legislation, legal deposit legislation within the electronic environment should be the result of a compromise based on the balance of rights between citizens and publishers." However, Larivière (2000) asserts that if the rights are compromised, there is a need to verify the main copyright instruments (Berne Convention or the Universal Copyright Convention) to which a country is signatory . South Africa is a signatory to the Berne Convention and is bound to frame its national copyright legislation within certain parameters. The Protection of Literary and Artistic Works in the Berne Convention provides the foundation for the control of copyright law internationally (Besek et al., 2008). The Berne Convention entails copyright protection with no rules and regulations, and therefore deposit of copies cannot be enforced (IFLA, 2000a; Larivière, 2000). Countries need to also support treaties like the World Intellectual Property Organisation Copyright Treaty (WIPO-WCT) that provides modern updates to the Berne Convention (Besek et al., 2008).

Most copyright laws that provide the exceptions for preservation institutions were created in the analog era, and often have limitations with regard to digital preservation (Besek, 2008). Yet digital preservation entails more complicated copyright issues than the preservation of the traditional print materials. Besek et al. (2008) emphasise that many of the activities involved in digital preservation, such as making multiple copies of a work, distributing copies among multiple institutions, and migrating works to new technological formats and media, involve the exercise of exclusive rights, including but not limited to the reproduction right.

Unlike the United States of America and Ireland, the South African Legal Deposit Act is not part of the country's Copyright Act. Copyright law, however, has not changed as quickly as the radical technological changes of recent decades (Shuttleworth Foundation, 2008). The South African Copyright Act No. 98 of 1978 has been amended from time to time, but section 13 that makes provisions for libraries and education has not been amended to date (Nicholson, 2008; Shuttleworth Foundation, 2008). Nicholson (2008) points out that the Act and its regulations are outdated and they do not address the digital environment, nor do they take advantage of appropriate limitations and exceptions ("legal flexibilities") allowed in international intellectual property agreements.

According to the Shuttleworth Foundation (2008) "the difference in pace of change generates uncertainties about creativity using new media and copyright." There are no specific provisions in South African copyright law to address libraries/archives and if copying takes place in terms of section 12(1) of the Copyright Act, it must be in accordance with undefined "fair dealing" (Shuttleworth Foundation,

2008). This implies only parts of the document can be copied, and complete documents are not covered. However, the Shuttleworth Foundation (2008) in their Open Copyright Review report found that the definition of 'fair dealing' and the exceptions it allows for are very vague and not clear at all. Fair dealing does not specify how much may be copied without the permission of the copyright holder. With the new issues that the digital environment has brought along, Smith (2004b) argues that "access will be driving preservation, and to succeed in their preservation mission, libraries must therefore stake out a public right of access".

Apart from not addressing the digital preservation issues, the South African Copyright Act No. 98 of 1978 conflicts with the South African Constitution's Bill of Rights that mandates access to information. Nicholson and Kawooya (2008) observe that the provisions in section 5 of the Copyright Act subject the majority of government documents to copyright restrictions. Nicholson and Kawooya (2008) argue that although government information is a publicly funded information "the public requires copyright clearance to reproduce it for any purposes beyond fair dealing." However, the Department of Arts and Culture submitted a Cultural Laws Third Amendment Bill to parliament that included a number of amendments to the Legal Deposit Act No. 54 of 1997. Amongst other amendments, a recommendation was made for a public interest copyright exception that included allowing places of legal deposit to make copies (including digital copies) of works in their lawful possession for purposes of preservation, replacement or security (Department of Arts and Culture, 2012).

Besides the South African Bill of Rights that supports the Universal Declaration of Human Rights Article 19, the Promotion of Access to Information Act (PAIA), 2000 (Act No 2) arises from the constitutional right, and provides more detail with regard to access to information (National Library of South Africa, 2004). The impact of the PAIA Act No 2, 2000 is that all other legislation providing access provisions is subordinate to it but access can still be managed in terms of other laws as long as it does not conflict with the PAIA (Harris, 2000). For legal deposit, this means unrestricted access to all materials even though the Legal Deposit Act No. 54 of 1997 section 7(5) (d) states that "the head of a place of legal deposit may, on the recommendation of the Committee, impose restrictions on certain categories of documents …" Lor (2003) asserts that "the two pillars of democracy are freedom of expression and freedom of access to information including, crucially, access to government information." This recognition should help to foster access to government and other records which are essential to develop a democracy. However, the range of freedoms of access to information, symbolic of liberation from apartheid, is under threat with the draft of the current Protection of State Information Bill that has been put before parliament (Library Association of South Africa (LIASA), 2010; Steward, 2010).

In a statement about the Protection of State Information Bill, LIASA (2010) emphasises that "this 'draconian' bill will have a major effect on media freedom and the democratic values of accountability [and] transparency" with regard to access to government information. If the Protection of State Information Bill becomes an Act it will affect the Legal Deposit Act that makes provision for official publications depositories which promote and provide access to publications and information held by the government.

Preservation Policy

Apart from the examination of other legislations affecting legal deposit in South Africa, there is a need to organise the different processes, and that requires a country to have a digital preservation policy. Drijfhout (2006) states that "a digital preservation policy would state the principles and long-term direction that would guide preservation strategies and action." A number of developed countries have digital preservation policies. However, South Africa, according to Drijfhout (2006), still has a long way to go, although research indicates that some progress has been made. Mpholefole (2011) confirms this, and states that a policy for the preservation of digital publications in South Africa is in the process of being created but is still at the draft stage.

The National Library of Australia's Digital Preservation Policy, third edition (2008), precisely sums up the current challenges of digital preservation and accessibility including issues related to the volume of materials, obsolescence, data corruption and loss, high costs and the need to preserve electronic

materials at creation. Harvey (2005) agrees with National Library of Australia (2008) with regard to digital preservation challenges and notes that there are still too many unknowns. Drijfhout (2007) emphasises that a national long-term digital preservation (LTP) policy is needed for South Africa with the purpose of enabling cooperation between major stakeholders and its positioning for discussion on the political agendas of government.

Research Methodology

The population of the study was surveyed using a self-administered questionnaire for 14 professional library staff (principal librarians and librarians) working in the OPDs and legal deposit sections of the libraries, and a semi-structured interview for the three heads (National Librarian and Library Managers) of the libraries. Non-professional library staff were excluded from the study, as an earlier study indicated that they lacked knowledge about the preservation of materials (Nsibirwa, 2007). The heads of OPDs were not interviewed, as the OPDs have not been in existence and functional for a long time. The decisions about the managerial issues pertaining to the OPDs are made by the Legal Deposit Committee.

Sampling for the questionnaire was not necessary because the population was small. Non-probability sampling in the form of purposive sampling was used to select a sample of the population to be interviewed based on the researcher's knowledge of the population. Although the study employed both qualitative and quantitative research approaches to shed light on the concepts, it was partially mixed because the instruments used were predominantly quantitative and therefore employed methodological triangulation. To organise and analyse data collected from the self-administered questionnaire, statistical analysis using SPSS was used. Conceptual content analysis was used to analyse the content from the open-ended questions of the questionnaire and the interview schedule. The data was summarised and presented in tables using descriptive statistics.

Results and Discussion of Findings

The findings of both the questionnaire and the interviews are combined and presented together. First, all general preservation policies were looked at to ensure that legislation is complied with. Then researcher looked at the written policies for managing these digital/electronic material,s as well as the storage methods and formats.

Preservation Policies

Preservation policies provide frameworks for the present, as well as the future and ensure that access to information is guaranteed. Table 1 clearly shows that South African depositories did not have policies to guide preservation, develop conservation facilities or train and recruit staff. Ten (90.9%) respondents mentioned that their libraries did not have a policy to improve preservation conditions and one (9.1%) respondent said that they had a policy. Nine (81.8%) respondents said they did not have a policy to develop conservation facilities and only two (18.2%) respondents said they had a policy. Four (36.4%) had a policy to recruit and train staff, six (54.5%) did not have a policy and one (9.1%) was unsure whether their library had a policy or not. This was a major flaw that was confirmed by the heads of depositories during the interviews. The interviewees confirmed that they had mission statements but not preservation policies. The mission statements provided by one depository clearly showed that the purpose, values and beliefs of the institution had nothing to do with preserving cultural heritage but support the vision and goals of a public library.

Yet, the Cultural Law Third Amendment Bill did not include any content with regard to regulations and policies for the legal depositories. However, the Legal Deposit Committee has, however, through the National Library of South Africa, created a manual specifically for OPDs in 2004. The OPD manual has guidelines for best practice and encourages OPDs to set their own policies based on generic guidelines (Baker, 2004). Yet, all the OPDs involved in the study did not have any policies in place. The need for change or revision of legislation was mentioned when a legal depository head expressed concern that regulations stated that they had to preserve materials in the original format received. Without preservation, conservation, training and recruitment policies that create frameworks and standards of the preservation of digital/electronic materials and other aspects of preservation management are affected.

Table 1: Existence of Library Policies (N=11)

Policy	Yes		No	
	Frequency	Percentage	Frequency	Percentage
To improve preservation conditions	1	9.1	10	90.9
To develop conservation facilities	2	18.2	9	81.8
To train and recruit staff	4	36.4	6	54.5

Digital/Electronic Materials Policy

A significant number of respondents, eight (72.7%), acknowledged that they did not have policies for preservation of electronic publications compared to three (27.3%) who said they had a policy. The few who said they had a policy are most probably referring to the draft digital preservation policy or the Legal Deposit Act. The heads of legal depositories clearly stated that they did not have digital preservation policies. However, the study indicated that slightly over half of the respondents (54.5%), accepted or acquired electronic materials although they did not have policies to guide them.

Collection of Electronic Materials

In addition, respondents were asked if the depositories accepted or acquired electronic materials for which it assumes preservation responsibility. Six (54.5%) respondents specified that they did, and five (45.4%) respondents indicated they did not. The six respondents whose depositories accepted and acquired electronic materials were questioned further to find out what types of electronic records they accepted. The six respondents stated that they accepted any electronic materials. The objects of deposit included static electronic documents only and not dynamic online materials. Valberg (2008) points out that the Act should be in accordance with specialists' policy. The British Act makes provision and even has a section regarding regulations for non-print materials. Policies help to set frameworks and standards, and are a requirement to build the foundation for digital preservation.

Digitisation

In terms of whether depositories create digital material as a result of digital conversion projects, the study revealed that nine (81.8%) respondents said they did not and two (18.2%) were unsure. Though an open-ended question about storage formats resulted into two (18.2%) stating that old newpapers were stored as Tagged Image File Format (TIFF), which indicated that they were scanned and digitised.

Formats and Storage Methods

To find out more information about the preservation of electronic material, several questions were asked with regard to storage methods and formats. The study also revealed that the majority that had digital materials in their holdings were available in physical format and were offline materials (shown in table 2). This is no surprise as publishers in South Africa are, currently expected to deposit static electronic documents at South African depositories. These electronic materials include videos, cassettes, text files, images, word processing formats, databases and pictures. Four (36.4%) respondents specified they did not have dedicated hardware/software for long term preservation, and only two (18.2%) respondents stated they did. The two respondents who stated they had dedicated hardware/software for long term preservation were asked to specify what systems were used. They both stated they had a scanner: Zeutschel AO.

Table 2: Digital Holdings Formats (N=11)

Formats	Yes	No	Non-response	Not applicable	Total
	Count	Count	Count	Count	Count
Video/Moving Images	5	0	1	5	11
Magnetic tape (open reel) (e.g., cassettes, and so on)	5	0	1	5	11
Flat ASCII files (e.g. , Text file with the file extension .TXT)	4	1	1	5	11
Spreadsheet format (e.g., Excel, and so on)	4	1	1	5	11
Text files with markup (e.g., SGML, HTML, XML, and so on)	4	1	1	5	11
Word processing format (e.g., MS Word, and so on)	4	1	1	5	11
Database format (e.g., Access, FoxPro, and so on)	4	1	1	5	11
Image format (e.g., TIFF, GIF, etc.)	4	1	1	5	11

(Source: Field data)

In addition, a question was asked to establish how digital materials received were stored. Shown in table 3, five (45.4%) respondents stated that electronic records were stored as received, one (9.1%) respondent did not respond to the question.

Table 3: Storage Methods (N=11)

Methods	Yes	No	Non-response	Not applicable	Total
	Count	Count	Count	Count	Count
Store as received	5	0	1	5	11
Hard drive	2	3	1	5	11
Optical Disc (Rewritable)	2	3	1	5	11
Magnetic tape (cassette or cartridge)	0	5	1	5	11
CD-ROM	0	5	1	5	11
WORM Optical Disk (Write-once-read-many)	0	5	1	5	11
Contract with third party for storage	0	5	1	5	11

(Source: Field data)

Respondents were asked to provide further examples of storage media and format in an open-ended question. Of the six respondents, this question was applicable to three (27.3%) who indicated that all were stored as received; two (18.2%) stated that they stored all old newspapers as TIFF; and one respondent did not respond to the question.

Respondents were questioned further if their institution refreshed or migrated their digital materials. This question was not applicable to five respondents. As shown in table 4, five (45.4%) respondents specified that their institution did not refresh materials, and three (27.3%) respondents indicated that their institution did not migrate, that is, transfer file formats from one software/hardware configuration to another. All institutions surveyed indicated that they did not use any preservation strategy of either migrating or refreshing the electronic materials. This is most probably due to lack of expertise in digital preservation. Ngulube (2003) also speculated that "lack of expertise in digital preservation partly explains the unsatisfactory state of affairs in the preservation of digital materials in South Africa." However, a number of developed countries have found that due to the complex nature and size of the problem, archivists and librarians cannot work in isolation; instead, they have formed national and international coalitions.

Table 4: Method of Digital Preservation (N=11)

Method	Yes	No	Unsure	Non-response	Not applicable	Total
	%	%	%	%	%	%
Refreshing	0	45.5	0	9.1	45.5	100
Migration	0	27.3	18.2	9.1	45.5	100

(Source: Field data)

Lastly, the respondents were asked to rank threats to the loss of digital materials (shown in Table 5).

Table 5: Threats Leading to Loss of Digital Materials (N=11)

Threats	Greatest threat	Moderate threat	Minor threat	No threat	Undecided	Non-response	N/A	Total
	%	%	%	%	%	%	%	%
Technological obsolescence	27.3	0	0	18.2	0	9.1	45.5	100
Insufficient policy or plan for preservation	18.2	9.1	0	18.2	0	9.1	45.5	100
Insufficient resources for preservation	9.1	9.1	0	27.3	0	9.1	45.5	100
Physical condition	9.1	0	0	36.4	0	9.1	45.5	100

(Source: Field data)

All these materials were stored as they were received on hard drives or optical discs shown in table 3. Like print materials, electronic materials should remain accessible and usable over time, in spite of technological changes (Millar, 2010). Of the six (54.5%) respondents who accepted or acquired electronic materials, only two (18.2%) stated that some of their materials (microfilm, floppy disks and diskettes) could not be mounted, read or accessed and had become obsolete. This finding could be attributed to lack of knowledge and skills in the preservation of electronic materials and inaccurate reporting. The results in table 5 show that only three (27.3%) respondents indicated that technological obsolescence was seen as the greatest threat. It is surprising that two (18.2%) respondents indicated that technological obsolescence was not a threat, nor were inadequate policies and insufficient resources. Yet, digital preservation requires constant funding to constantly manage change and the continuous growth of the collection (Jones and Beagrie, 2003; Kavcic-Colic, 2003; Wilson, 2004; Harvey, 2005). Other resources required are equipment, computers as well as ongoing staff training.

In addition, four (36.4%) respondents thought the physical condition of materials was not a threat, although all the different types of storage media were threatened by external elements like dust, magnets, excessive heat, direct sunlight and moisture. This finding could also be due to the fact that magnetic tape and microfilm are more robust than today's CD-ROM and memory sticks. However, equipment used to read microfilm and magnetic tape is becoming obsolete.

Conclusion and Recommendations

There is still a lot that needs to be done with regard to refining and reviewing legislation including the Legal Deposit Act, the Copyright Act and development of a national preservation policy. There is also an urgent need for an able institution with enough human and financial resources to implement the Legal Deposit Legislation, as millions of crucial documents are currently lost. The study concluded that efforts are being made to develop a digital preservation strategy for electronic publications, as this is needed as a matter of urgency. This includes efforts to amend the Legal Deposit Legislation to add a public interest copyright exception according to the Department of Arts and Culture (2012) that allows "places of legal deposit to make copies (including digital copies) of works in their lawful possession for purposes of preservation, replacement or security". This is highly recommended as preservation strategies as well as the acquisition, storage and preservation of electronic documents over time involve continual acts of copying (Muir, 2004). However, the Department of Arts and Culture (2012) emphasises that "legislation needs to take into account the collection of associated software, manuals and hardware needed to ensure access in the future." In addition, the public interest copyright exception should forbid copying for commercial advantage. Depositories should also be allowed to bypass digital rights management features, especially when owners fail to deposit copies (Department of Arts and Culture, 2012).

To ensure access for the future generations, legal depositories require a solid foundation from proper legislation, adequate funding, staff with preservation skills and knowledge, proper preservation policies, activities and strategies, as well as collaboration with other countries to look at a way forward with the preservation of electronic publications.

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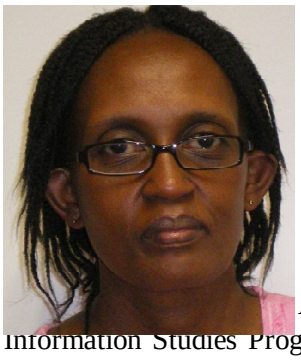

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