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Preservation of, and access to records at the KwaZulu-Natal Archives

By

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(BA, PGDIS)

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DECLARATION

I, Sbusiso Christof Mtshali declare that:

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ABSTRACT

The KwaZulu-Natal Archives provides for the protection of a treasure house of documents, oral history, maps and photographs that tell the history of the KwaZulu-Natal province. The Archives came into existence on 1 April 2001, in terms of the KwaZulu-Natal Archives Act, Act 5 of 2000. The provincialization of archives in South Africa is supported by Schedule 5 of the Constitution. The study investigated the preservation of, and access to, records at the KwaZulu-Natal Archives. The research problem which this study addressed was that “the preservation of public records and archives, in general and vulnerable records, particularly in South Africa has been greatly neglected” (Ngubane, 2003:18).

The focus was on how the different materials are preserved and stored. Every archival institution has unique needs with regard to the climatic conditions of the area. The study examined the policies that are followed to preserve records at the KZN Archives, activities used to prolong the existence of records, training of staff concerning the preservation of records, the challenges faced by the staff in preserving records, ways used to ensure that records are accessible to the public, extent the KZN Archives are accessible to the majority of the population in KZN, how adequate is the KZN Archives building for the purposes of preserving records, and how the KZN Archives ensure that records are accessible fairly and equally by the public. The focus of the proposed research was on records of the KZN Archives in Pietermaritzburg (the Head Office). Due to time constraints and the lack of funds site visits were not made to the branches in Durban and Ulundi. However questionnaires were sent to these branches. For the purposes of this research only print records were investigated.

In this study qualitative and quantitative techniques were employed. Methodological triangulation was used to gather data and this consisted of a questionnaire, interviews and observation. The study population comprised 19 members of the staff in the KZN Archives. All 19 staff had duties relating to the access and preservation of records and the Director and both professional and non-professional staff were included. Fifteen staff members participated in the study giving a response rate of 79%. SPSS was utilized to arrange and analyze data collected from the self-administered questionnaire. Content analysis was used to analyse data from the interview schedule, and observation schedule. The study found that the KZN Archives still need to improve preservation and access to its records. The need to create a digital archive was strongly recommended to ensure easy access to records.

DEDICATION

This thesis is dedicated to my family. To my parents Busisiwe and Thokozani who have supported me. In addition to my siblings, Thobeka, Londeka and Asanda who have motivated and loved me during the production of this work. Finally to my spiritual brothers and sisters who have encouraged me and supported me.

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LIST OF ACRONYMS

HVAC	Heating, ventilation and air conditioning system
LIASA	Library and Information Association of South Africa
SASA	South African Society of Archivists
KZN Archives	KwaZulu-Natal Archives
UNESCO	United Nations Education, Scientific and Cultural Organisation
UV	Ultraviolet

Chapter 1: Introduction

1.1 Introduction

Preservation of and access to records is very important. Nsibirwa (2012:225) states that “the main reason for preservation is for people to be able to access the publications for posterity and therefore future generations will get to learn about their national heritage”. Feather (2004:1) emphasises that “everything we have inherited from the past has come down to us because it has been preserved.” However, Nsibirwa (2007:1) states that all over the world archives are faced with deterioration of collections. The current study investigates preservation of, and access to records at the KwaZulu-Natal Archives (KZN Archives).

This chapter will cover the background and research problem, key questions, broader issues, rationale for the study, delimitations of the study, definitions of terms, conceptual framework, and, briefly, the research methodology adopted. The chapter will end with a summary.

1.2 Background and research problem

The KwaZulu-Natal Department of Arts and Culture provides a useful overview of the KZN Archives, including its legislative underpinnings:

The KwaZulu-Natal Archives is the custodian of a treasure house of documents, oral history, maps and photographs that tell the history of the KwaZulu-Natal province. The Archives came into existence, effectively, on 1 April 2001, in terms of the KwaZulu-Natal Archives Act, Act 5 of 2000. Schedule 5 of the Constitution provides for the provincialization of the archives. Before this, two archival services operated in the province: the KwaZulu Archives Service operated from Ulundi in Zululand in terms of the KwaZulu Archives Act number 12 of 1992, and the National Archives and Records Service which operated from Pietermaritzburg and Durban in terms of the National Archives Act, 43 of 1996. Due to the large geographical areas that the archival services cover, the KwaZulu-Natal Department of Arts and Culture runs three archival repositories in order to ensure service delivery. The KZN Archives is headed by the provincial archivist based in the head office in Pietermaritzburg. The other two repositories are located in Durban and Ulundi and each are headed by a deputy manager and two assistant managers. The KZN Archives building in Pietermaritzburg

is purpose built and has six floors” (The KwaZulu-Ntal Department of Arts and Culture budget speech, 2016: 1).

There are archives in a number of countries such as Nigeria where the preservation and access to archival records is getting worse, both for print copies and electronic records (Forde, 2005:193). The situation in South Africa, it appears, is not better. In this regard, Ngulube (2003:18) points out that: “the preservation of public records and archives, in general, and vulnerable records, particularly in South Africa has been greatly neglected”. This is a problem because archives possess important records that contribute to South African heritage. If they are neglected, this will mean that the South African heritage will not be adequately preserved and the heritage will be characterized by numerous gaps thus impacting on reference and research.

In the South African context, the role of archives is to ensure that the South African social, economic, intellectual and cultural heritage is preserved irrespective of format. The objective of many archival institutions in this country is to identify and preserve records with archival value in order to ensure their long-term accessibility (Ngulube, 2002:27). Without preservation there can be no current or future access to the information that practically constitutes the archival heritage of South Africa (Ngulube, 2002:27).

Ngulube (2003:1) states that “preservation as a collection management strategy is a key to long-term access to records and archives”. Preventing and slowing down deterioration of organic materials is an important factor of traditional preservation (Conway, 2010:64). In addition, Ngulube (2007:54) states that “storage conditions offer many opportunities to prolong the life span of documents because they contribute to their physical well-being”. However, it is impossible to keep collections the same eternally. They will change even if they are not touched by anyone because the environment will affect them (Cloonan, 2001:235).

Cloonan (2001:231) argues that “preservation must be approached not only as a technical solution to technical problems but also as a more complex concept that includes social dimensions”. This comes from the fact that today preservation specialists usually use technical details to deal with technical problems and this is time consuming (Conway, 2010:62). On the other hand, Varlamoff (2004a:159) states that preservation is not about

collections but “it also includes preservation management, staff training and preservation curricula and identification of priorities and new technologies”. The building is an important factor and affects preservation and access in a variety of ways and it is also an important source of security (Nsibirwa, 2007:33). Nsibirwa (2012:76) states that the vital design issues for archival buildings are:

- Fire protection of the stored archival material.
- Safety of staff and visitors.
- Controlled access to archival stack rooms.
- Controlled temperature for different types of archival materials stored in the preservation office areas.
- Day lighting must not harm the archival material.

Dewah and Mnjama (2013:56) point out that “archival and records centre buildings need to provide adequate facilities for the protection of documents against damage or deterioration, care, and maintenance records and manuscripts”. Banks (2000:121) notes the important issue of standards and states that “although there are buildings standards, these standards vary due to the fact that different geographic locations have different climatic conditions and also when they were built”. Banks (2000:136) points to buildings which have been adapted to serve as archives and states that such buildings do not have the appropriate facilities for preservation and access of materials and most of them experience electrical problems and leaking pipes. Temperature is another factor to consider and it is suggested that creating a double wall structure in the building, and storing material in internal spaces with staff and other functions around the perimeter of the building can reduce the effects of outdoor temperature (Banks, 2000:125). He emphasises that piping in stack rooms and windows should be avoided (Banks, 2000:126).

Reilly (2008:3) states that “deterioration occurs through three basic processes caused by mould, fungi, insect, and physical damage”. Nsibirwa (2012:83) contends that it is not right to expose material to natural light because of its intensity and high ultraviolet levels which are harmful to paper and other material. Furthermore “it is important to control temperature and relative humidity in archival storage because they contribute to the deterioration” (Nsibirwa, 2012:85). The biological agents such as insects, rodents and macro-organisms like cockroaches and silverfish “attack paper and other organic materials when both temperature and humidity are uncontrolled” (Nsibirwa, 2012:92).

It is important for the archive, regardless of its size, to take preventative measures to avoid the event of unnecessary disaster. There are natural disasters and human made disasters and both of them can affect libraries and archives (Nsibirwa, 2012:103). Nsibirwa (2012:103) states that “natural disasters include hurricanes, floods, earthquakes, volcanic eruptions, sandstorms and tsunamis”. On the other hand “human-made disasters include acts of war and terrorism, fire, broken pipes, leaking roofs and chemical spills” (Nsibirwa, 2012:103).

“Access to the archives is very vital for an informed community”. All archives are open to all citizens except if there are exceptions grounded in law that deny access. It is not compulsory for archival institutions to open private archives to external users except if there is a law that imposes this responsibility on them (Principles of access to archives, 2012: 8).

Many archivists emphasize “that opening the institutional archive helps to maintain institutional transparency and credibility, and improves public understanding of the history and its contributions to society” (International Council on Archives, 2012: 8). Archives that give the public access to all their records are required to publish an access policy (Principles of access to archives, 2012:8). They begin with the presumption of openness and if there are limitations they must be clear so that people will be able to understand them. Users “have a right to know whether a record or a file exists even though it is withheld from use or has been destroyed” (International Council on Archives, 2012:8).

It is a professional duty of the archivist to promote access to archives. Through the use of the internet, web-based publications, print materials, public programmes and commercial media, the archivist ensures information about archives is made available. Archivists “should provide the widest possible access to archives but they do recognize and accept the need for some limitations” (International Council on Archives, 2012:9). They also “ensure that that the access policies and rules for their institution are published so that the limitations and the reasons are clear to the people” (International Council on Archives, 2012:9). These limitations “are compulsory for a short period of time or until a certain condition has occurred like the death of the person. There may be limitations within the institution for the protection of personal data and commercial secrets. Access to donated records can be restricted by conditions” (International Council on Archives, 2012:9).

The access rules apply equally to all people without discrimination. Archival institutions provide equal access to users but there are certain constraints that may necessitate archivists

to make distinctions between researchers (International Council on Archives, 2012:9). People who need “access to archives for human rights purposes are given access to the relevant archives even if access is denied to the general public. Public archival institutions do not charge an admission fee to people who want to do research. Archivists have access to all records in their custody in order to preserve, arrange and describe them. They help their institutions to establish access policies and they work with lawyers on the interpretation of restrictions” (Principles of access to archives, 2012:9-11).

As is evident from the above, both preservation and access are key to ensuring that the archival heritage of a country is both maintained and accessible (and thus subsequently used). The current study dealt with the preservation of and access to records at the KZN Archives. There are many issues that were explored through this research, including the significance of “preservation and access to records and archives”. The causes of deterioration and methods of control that are used within the archive were investigated. The current study also assessed the preservation programmes that are in place. The storage and handling of materials in different media was examined. Access to records was also investigated given that the purpose of preserving records is to prolong their lifespan thus ensuring that they are accessible in future. The problem which this study addressed was encapsulated by the statement that “the preservation of public records and archives, in general, and vulnerable records, particularly in South Africa has been greatly neglected” (Ngubane, 2003:18). This neglect would undoubtedly impact on access and thus preservation and access were the two foci of the study which investigated the situation in the KZN Archives specifically.

1.3 Purpose of the study

Given the above, the purpose of the study was to investigate the preservation of and access to records at the KZN Archives. In order to achieve the purpose the following key questions were asked.

1.4 Key questions

1. What are the policies that are followed to preserve records in the KZN Archives?
2. What activities are used to prolong the existence of records?
 - How well trained is the staff concerning the preservation of records?

- What measures are taken to ensure disaster preparedness and security of records?
 - How suitable is the KZN Archives building for the purposes of preserving records?
3. What ways are used to ensure that records are accessible to the public?
- To what extent is the KZN Archives accessible to people with disabilities?
 - How do the KZN Archives ensure that records are accessible fairly and equally by the public?

1.5 Broader issues

Three broader issues which impact on both preservation and access and which were not examined in any depth or detail in the study were education for preservation, the digitization of archival resources both of which underscore the third issue, namely, the importance of funding. These are briefly elaborated on below.

After it was realized that “preservation problems became part of everyday working life in ageing and evolving format collections, it became clear that preservation should be considered an essential rather than a peripheral aspect of professional Library and Information Science education” (Murray, 2006:98). Without preservation there is no future for current records. Future generations will be unable to benefit from them because the chances are that the records will eventually be totally destroyed. Education for preservation is thus a broader issue which was examined because many archival institutions have valuable records and they need staff with sufficient skills to ensure that records are kept in good storage. Archival preservation education in tertiary institutions and staff on-the-job training are scarce and exist only in a few developing African countries, like South Africa, for many different reasons (Murray, 2006:98). This leads to a great loss of information because many valuable records are not protected from deterioration and damage.

The importance of education and training is further underscored with the trend toward digitization of archival resources. Webb (2004:35) highlights that “access to digital information depends on all components of an access system working together”. Therefore, information professionals need to be trained in digital preservation so that they will have sufficient skills. Furthermore, many digital resources are not catalogued because of the cost of creating digital archives (Gorman, 2006:6). This shows the significance of funding in

records and archival management. The biggest challenge of digital preservation is the development of technology which results in the obsolescence of equipment and software (Webb, 2004:35). Therefore, funding for digitization is an important factor because many archival institutions have valuable print records which need to be digitized so that they will be protected from damage and easily accessible at the same time. It does perhaps go without saying that funding is necessary for resources that ensure preservation and access to archives. Given the above, education, digitization and funding were broader issues touched on in the study.

1.6 Rationale for the study

The purpose of preserving records is to ensure that they are made available for use. There are many challenges experienced by archives to prolong the existence of records. While all three repositories in KwaZulu-Natal were included in the study, the KZN Archives in Pietermaritzburg was specifically targeted given that it comprises the head office and is the largest of the three repositories. As will be indicated under the delimitations of the study below, conditions in the Pietermaritzburg Archives were personally observed by the researcher (this was not possible for the remaining two repositories) to get a first-hand view and understanding of the issues related to the preservation and accessibility of the records held.

As has been stressed above, both preservation and access to records are important to the nation's heritage and both have been and continue to be neglected in a number of contexts, including South Africa. This research investigated issues relating to the preservation of records at the KZN Archives and issues related to ensuring that those records are accessible to the public. The focal point was to determine how the various records were preserved, stored and made accessible. It was anticipated that the study would underscore the why the preservation of records was important, and the challenges archives have in preserving and making these records accessible to the user public. It was also anticipated that the study would be important in that it would also encourage the preservation of South African heritage. Finally, and most importantly, it was anticipated that the study and its findings would be beneficial for KZN Archives itself because the Archives would get to better know its strengths and weaknesses with regard to preservation of and access to the records which it

houses. The weaknesses would point to what needs to be rectified by the Archives and by so doing, would have a positive impact on both preservation and access.

1.7 Limitation of the study

As noted KZN Archives comprise Pietermaritzburg, Durban, and Ulundi repositories. However, while the personnel in all three sites were surveyed through a self-administered questionnaire, only the Pietermaritzburg repository was visited for the purpose of observation. This limitation was due to financial constraints. Thus the findings which emerged from the observation and which related to the conditions under which the archival materials were housed apply, in the main, to the Pietermaritzburg repository only.

1.8 Definitions of important terms

Various key terms are defined below:

Access: Is defined as “the right, opportunity or means of finding, using or retrieving information”. In “terms of the present study, access refers to the right to use the KZN Archives by the members of the public” (Millar, 2009:6). This term is further elaborated under the conceptual framework below.

Archives: Is defined as “the agency or institution responsible for selecting, acquiring, and preserving, available records” (Millar, 2009:6).

Preservation: In a records and archives environment, preservation “is the act of protecting records against damage or deterioration. The term is most often used to refer to the passive protection of archival material in which the item is not subject to any physical or chemical treatment” (Millar, 2009:31). For the present study, preservation was defined as protection of records in the KZN Archives. With the term “access”, preservation is also further discussed in the conceptual framework below.

Record: In a records and archives environment, a record is “documentary evidence, created, received, maintained and used by an organisation (public or private) or an individual in pursuance of legal obligations or in the transaction of business” (Millar, 2009:34). Records can be in print or digital formats but, as noted above, this study was delimited to print records given that, as mentioned, the KZN Archives has not digitized its records yet.

1.9 Important concepts

Smyth (2004:2) states that concepts are useful instruments to organise research and assist a researcher to make meaning of later findings. In addition, he states that “concepts should be intended as a starting point for reflection about the research and its context” (Smyth, 2004:2). Babbie and Mouton (2001:565) state “that it is important to explain concepts to make meaningful conclusions about them”. Conceptualization is defined as the process of identifying the real meaning of a term (Schutte, 1996:69). Explanation of concepts facilitates the understanding of research better by enlightening the various elements that have a bearing upon it (Babbie and Mouton, 2001:565). In this study, the concepts of preservation and access are covered below and in the literature review, and will be used throughout the study

1.9.1 Preservation

Preservation is an umbrella term which includes all the ways that are employed for the protection of “library and archival material and the information contained in them” (Adcock, Varlamoff and Kremp, 1998:5). The meaning of preservation has changed over the years. Cloonan (2007:134) states that in the 12th century “preservation meant collecting, acquiring and putting the material in an institution”. One of the reasons why the meaning of preservation has changed is the publication of records on new carriers that need different preservation methods (Varlamoff, 2004:159). For example, the emergence of electronic records required new preservation methods that are different from the preservation methods of print records.

Ngulube (2002:27) states that preservation is considered to be important because it gives people an opportunity to learn from the past. Preservation is an “umbrella term under which most librarians and archivists cluster all the policies and options for action, including conservation treatments of different formats of information materials” (Kalusopa and Zulu, 2009:98). According to Mason (2007:201), preservation in cultural heritage refers to permanence and is an important tool in keeping cultural heritage and building up the resources that bring great social and economic benefits to the people.

1.9.2 Access

The term access refers to the “terms and conditions of availability of records maintained or held by an archive for evaluation or consultation by its users” (Trace, 2012:76). Ensuring that archival records are accessible requires not only an understanding of the use and users of archives but the creation of access policies and procedures as well. The meaning of access as an important part of archival work is highlighted not only in the archival literature but also in a number of key professional documents describing the education and certification of archivists (Trace, 2012:76).

Sebina (2009:151) states that “access to archival records is literally access to history”. History in the South African context is the South African heritage. Access to history provides people with the opportunity to know their past. If they do not know their past they will not know their present. Therefore it is essential for archives to improve accessibility to archival records (Cloonan 2007:134). The National Archives of South Africa Act (NASAA) of 1996 generally regulates access to archives in South Africa. The right of access to archival records is provided by NASAA while the Promotion of Access to Information Act (PAIA), on the other hand, provides the same for all records regardless of their age (Sebina, 2009:152).

1.10 Research methodology

Methodological triangulation was used to look at the problem in a number of ways, instead of using only one way. Methodological triangulation “is defined as the way of using a number of methods to investigate one problem” (Terreblanche, Durrheim and Painter, 2006:380). Babbie and Mouton (2001:275) state that “triangulation is generally considered to be one of the best ways to enhance the validity and reliability of the research done”. Various methods were used to carry out this study and they comprised the following:

- A survey using a self-administered questionnaire
- Structured observation
- Interviews.
- Graphic data.

The population of 19 respondents included professional and non-professional repository staff. These respondents comprised one repository director, three principal archivists, five archivists and ten repository technical staff members. Given the small size of the population sampling was not considered necessary. To assist in ensuring validity of the findings the instruments were pre-tested and the questions posed addressed the key questions listed above.

In the study both quantitative and qualitative techniques were used. The software program SPSS was employed to organize and analyze the data obtained from the closed questions in the self-administered questionnaire and the items in the observation schedule. Content analysis was used to analyze the responses to the open questions in the questionnaire and the interviews.

The research methodology used in the study is described and discussed in detail in Chapter 3.

1.11 Structure of remainder of the study

The remainder of the study is structured as follows:

Chapter 2 comprises the literature review in which the pertinent literature regarding preservation and access to records is described and discussed. The methodology used by the researcher is explained in Chapter 3, and the results of the study are described in Chapter 4.

The discussions of the results are highlighted in Chapter 5 and the final chapter, Chapter 6, encompasses the research findings, conclusions and recommendations.

The appendices follow after the reference list.

1.12 Summary

In this introductory chapter, the background to the study and the study problem were presented. This was followed by the research questions and the rationale for the study. The delimitations of the study included the fact that the study was limited to print records. Definitions of terms that are used in the study were provided. The research methodology used was briefly pointed to. The two fundamental concepts underpinning this study, namely preservation and access were defined and discussed. The chapter ended with a brief outline of the remainder of the thesis.

Chapter 2: Literature Review

2.1 Introduction

The literature review is part of the research where there is broad reference to related research in one's field. The researcher identifies the theories and previous research underpinning the research problem. In addition, the literature review can be used to support the identification of a research problem and to show that there is a gap in previous research which needs to be filled (Ridley, 2008:1). The literature consulted for this review and the study as a whole included books, theses and journal articles on the topics of preservation, access, archives and records. Internet based resources were also included.

This literature review “investigates issues relating to the preservation of, and access” to archival material. The review will focus on policies for preserving records, training of staff, prolonging the life of records, disaster management, security, archival buildings and access to records. To begin with, the nature and role of archives is discussed, as is the “records life cycle theory” and the “records continuum theory” – the two theories which underpin this study.

2.2 The nature and role of archives

All records received and created by government departments are considered to be public property. They are considered to be important because they possess information that provides evidence of important legal and administrative transactions and obligations. Given the value of the information possessed by archives, archives are considered to be important for a country's heritage (Rhoads, 1983:3).

Archives serve as the collective institutional memory of the government and its sectors. They are:

an essential tool on behalf of administrative efficiency and economy, by providing ready access to the government's past experience, including its successes and failures, and by furnishing precedents when problems and challenges arise that are similar to those faced in the past (Rhoads, 1983:17).

As institutional memory, archives can contribute to economic and social development in developing countries. They are an exclusive source of information on earlier developmental initiatives and of demographic, economic and social information useful in planning and development on local, regional, and national levels (Rhoads, 1983:17).

Maidabino (2010:1) states that

the desire to keep and use records of knowledge and information for reference and permanent preservation can be traced to the earliest times of human history. History shows how people of the ancient era kept records of their beliefs and experiences using items at their disposal. Clay tablets, papyrus, palm trees, bark of trees, animal skins, stones and many other writing surfaces, for example, were utilized for various reasons, including historical documentation. With the development of paper and other non-textual documentary forms such as films, photographs, still and motion pictures, videotapes and related machine readable forms, archival material was easily accessible (Maidabino, 2010:1).

In earlier years, no distinction was made between record rooms (archives) and libraries. Given this it could be argued that archives have existed for as long as records themselves have existed and been kept. Uduigwome (1989:28) defined archives “as the official and structured records of governments and organizations, no matter how old they are”. But they are preserved “because of the information they contain”. Evans (1988:4), on the other hand, explains “that archives have constituted one of the world’s primary sources of information, developing exclusively out of the actions of organizations, institutions, families and individuals”. Archives, according to him, are “records of an entity that have been selected for preservation because they possess enduring value” (Evans, 2010: 4).

Cunningham and Philips (2005:1) defined a record “as information created, received and maintained as evidence and information by an organization or person, in pursuance of legal obligation or business”. Archival records “are non-current records of an organization, individuals or families, created, received and preserved (by a public archives agency) because of their administrative, historical, legal, cultural, or other values” (Maidabino, 2010:1). Public archival agencies “play a very important role for the community because they promote reliable archival records keeping and maintain a noticeable, accessible and known collection” (Maidabino, 2010:1). The public archives agencies “enable and promote best practice in the

management of government records in all formats, from the point of creation and for as long as they are necessary to support the needs of government and the people” (Maidabino, 2010:1).

Maidabino (2010:1) states that archives are very important “for the preservation and presentation of cultural heritage and national identity, and serve as tools for administrative efficiency”. In addition, “archives complement the human memory, thereby allowing the flow of recorded information of the past for future use. The effective preservation and use of such recorded information can, as a result, greatly influence societal, political, cultural, administrative and economic transformation” (Maidabino, 2010:1). Cunningham and Philips (2005:1) described “the responsibility that archives have in a democratic country as an important component in social transformation”. The authors point to the important role that archives play in political life when they state that “there is no political power without control of the archive”.

Archives contain important documentation regarding the identity, rights, privileges, entitlements, and responsibilities of individuals and organizations (Rhoads, 1983:17). These valuable tenets continue living because the archives contain information about people, organizations, and social and economic developments and trends. Any government sector or organization will need to refer to records it has created in the past to verify past decisions and continuing obligations. If archives are not organized, it will be difficult to access them and this will lead to uninformed and possibly wrong decisions and actions. If the information from archives is used in current decision-making, government actions will more likely be soundly-based and successfully implemented. There are fewer chances of failure and of wasting scarce resources unnecessarily if the information from archives is used (Rhoads, 1983:19).

In every country, the individual citizens owe certain obligations and responsibilities to the state, and the state owes rights to the citizens. The documentation of these relationships and obligations in archives is important both to the state and to the individuals and organizations (Rhoads, 1983:20). The archives possess records concerning the origins and migrations of the people, the successes and failures of their leaders, and wars and relationships with other countries. The information they possess is useful for the betterment of the people in a variety of ways. Archives can serve as an educational and cultural resource (Rhoads, 1983:23).

Administering preservation and access are essential archival functions. The subject of access, in particular, gained prominence with archivists in South Africa only since the adoption of the Constitution of South Africa in 1996, and the passing of the National Archives of South Africa Act 1996. According to subsection 2 of section 11 of the National Archives of South Africa Act 1996, all records that have been in existence for 20 years are public archives open for public inspection subject to the provisions of any other Act of Parliament. Section 12(1)(b) of the Act states that then National Archivist has the power to grant access to records that are less than 20 years old upon request, again subject to any other Act of Parliament (National Archives of South Africa Act 1996).

According to the Constitution, archives (apart from the National Archives) are a provincial responsibility and as a consequence each province should have its own act. In KZN the management of archives in the province is governed by the KwaZulu-Natal Archives and Records Service Act 8 of 2011. The Act serves a number of purposes and these are as follows:

- to provide for the establishment of the KwaZulu-Natal Archives and Records Service;
- to provide for the proper management and care of public records in the Province of KwaZulu-Natal;
- to provide for the preservation and use of a provincial archival heritage for all the people of the Province of KwaZulu-Natal;
- to repeal the KwaZulu-Natal Provincial Archives Act, 2000 (Act No. 5 of 2000);
- and to provide for matters incidental thereto (KwaZulu-Natal Archives and Records Service Act 8 of 2011).

In order to understand the field of protection of records in the archives, one has to know the two archival theories: the life cycle theory and the records continuum theory. The life cycle theory is used in the KwaZulu-Natal Archives but it is important to know both theories if one is working with records. These theories are discussed below.

2.3 The records continuum theory

Kemoni (2008:5) stated that “the continuum model is generally known for managing records and archives both in paper and electronic form”. Under the “records continuum model, archivists are responsible for managing every stage in the life of a record” (Kemoni 2008:5). Duranti and Preston (2008:3) revealed that “the records continuum model is important because it widens the understanding of records and record keeping systems offered in the life cycle concept”. The goal of the “records continuum model is to provide the assurance of reliability, authenticity and completeness of records”. Duranti and Preston (2008:4-5) confirmed that “the records continuum framework provides a collective understanding, consistent standards and integrated best practice criteria”. They also described the “record continuum model as an integrated record keeping framework that simplifies provenance, underpins accountability and provides authoritative sources of value added information” (Duranti and Preston 2008:5).

2.4 The life cycle theory

The life cycle theory is a common theory used in archival practice and is adopted for this study. In terms of the theory records are born and after a certain period they die and are disposed of; but those with permanent value are sent to archives. This process is known as the life cycle of a record. In other words, a record has a life similar to that of a biological organism:

- It is born (creation phase).
- It lives (maintenance and use phase).
- It dies (disposition phase).

The life cycle of records is an important concept in records management. It is a way of looking at how records are created and used. The life cycle is based on the idea that records become less important as time passes. Ninety percent of the use of a record takes place during the first 90 days after it is created. This short period of high use is followed by a longer period of low use. The records only need to be looked up occasionally during this second phase. Eventually, even this limited use will end and the records will have no further value to their creator (Duranti and Preston 2008:6). However, records with permanent value are

transferred to archives and this is known as the archival phase. The archival phase includes the following stages:

- Selection/acquisition of the records by an archives;
- Description of the records in inventories, finding aids, and the like;
- Preservation of the records or, perhaps, the information in the records; and
- Reference and use of the information by researchers and scholars (Pearce-Moses and Richard, 2005: 2).

It is the archival phase outlined above which is central to this study.

Nsibirwa (2012:32) states that the following people are involved in the records life cycle: the creators who have a primary responsibility for managing records during the creation and active stage; the records manager who takes responsibility in the semi-active stage; and the archivist who takes responsibility for preservation and providing access to the archival records in the inactive stage.

The preservation of records which have been deemed to be of value and which have been placed in archives is very important for the future use of those records. Future generations cannot access records if they are not preserved today. The preservation of records is discussed below.

2.5 Preservation of records

Ngulube (2003:1) states that “preservation as a collection management strategy is a key to long-term access to records and archives”. Preventing and slowing down deterioration of organic materials is an important factor in traditional preservation (Conway, 2010:64). In addition, Ngulube (2007:54) states that “storage conditions offer many opportunities to prolong the life span of documents because they contribute to their physical well-being”. However, it is impossible to keep collections the same eternally. They will change even if they are not touched by anyone as the environment will affect them (Cloonan, 2001:235).

It is important that the preservation of archival records is underpinned by a preservation policy. It is not easy to preserve archival records without a preservation policy and records will be at greater risk of being damaged or destroyed. The preservation policy is discussed below.

2.6 Preservation policy

A preservation policy “will clarify the connection between an organisation’s mission and preservation activity. It provides the foundation for launching priorities and justifying investment, and for the improvement of preservation strategy and preservation programmes”. A preservation policy is a living document about the protection of archival records from damage (Foot, 2001:15).

Archives, particularly in tropical areas, “should have preservation policies that comprise biological management practices, to serve as guides to archival personnel in maintaining a pest- and mould-free environment in the archives” (Wamukova and Mutula 2005:9). The authors go on to state “that most African countries do not have preservation policies in their archives and information centres”. However, Olatokun (2008:10) pointed out “that while some archives in Africa have preservation policies, the provisions in the guidelines are often not adhered to”. On the other hand, Foot (1996:9) argued that “although human resources, knowledge, common sense, time and energy are vital, adequate funding is even more important for successful implementation of a preservation policy”. Olatokun (2008:10) in fact went so far as to refer to inadequate funding as the “greatest constraint against effective preservation of archival materials”.

A preservation policy “is an important factor in a collections management framework irrespective of the size of the collection or organisation. Building a successful preservation policy relies on a comprehensible sense of purpose, extensive teamwork and good communication” (Foot, 2001:1). According to the Public Records Office of Northern Ireland, a preservation policy states that records must always be:

- Handled in a way that will minimise the risk of damage and take account of their physical condition.
 - Stored in a safe and secure place.
 - Moved with care between places.
 - Handled under appropriate preservation conditions like avoiding unsuitable temperatures.
- (Public Record Office of Northern Ireland Preservation Policy, 2007:3).

Foot (2001:2) elaborates further, stating that a strong preservation policy will:

- Clarify the connection between the organisation's mission and preservation activity.
- Clarify the possibility of preservation activity by identifying the collections to be preserved, their significance and the desired retention period.
- Act as a focal point for collaborative working across organisations and in some cases between organisations.
- Clarify relations with other aspects of collections management such as collections acquisition, access and security.
- Provide a statement of responsibility against which performance can be monitored.
- Demonstrate the organisation's long-term loyalty to its collections to funders and users, internal and external.
- Work as a communication tool, internally and externally.
- Provide a foundation for the development of preservation plans and preservation programmes.
- Provide a basis for establishing priorities and justifying investment.
- Demonstrate responsible stewardship for the benefit of current and future users.
- Put in plain words to users why certain actions are taken and others are not (Foot, 2001:2).

The preservation policy "should include a statement on the archival approach to housekeeping, including dust monitoring, cleaning routines, guidelines for cleaning, and training of staff, contractors or volunteers" (Foot, 2001:16). In addition, it should also refer to what emergency plan is in place and this should include response procedures and how the archive will continue its business. The complete plan and procedures "should be included in an openly available version of the preservation policy" (Foot, 2001:16). The preservation policy should include a statement on what the archive's approach is to preservation and factors which should be covered are:

- How preservation priorities are recognized.
- The creation and retention of records.
- Policy on management decisions.
- The use of suitably trained professionals.
- The preservation principles, professional principles and ethics in use (Foot, 2001:16).

The preservation policy

should outline how the organisation approaches the storage of its collections. The format, structure, size, and shape, as well as the age, rarity and value of the collections, will also influence the way in which they should be stored. Some types of material will need greater security, others a different and/or better controlled environment or extra protection (Foot, 2001:12).

Emphasizing and raising awareness of preservation not only throughout the organization but also throughout the community should be an important consideration of the policy. In addition, the policy needs to outline the organization's obligation to training for:

- All archive staff and volunteers
- Contractors as appropriate
- Users (Foot, 2001:12).

Finally, the policy should

contain a statement of the preservation philosophy, balancing preventative preservation with recovery preservation. It should be supported by accepted standards, ethics and an elevated level of professional performance. It should include a statement on the organisation's approach to risk management, or a link to the risk assessment and risk management strategy (Foot, 2001:11).

The purpose of the preservation policy is, in essence, to prolong the life of records. Prolonging the life of records is a broad notion, and is dealt with below.

2.7 Prolonging the life of records

The life of records can be extended if they are protected from deterioration. Before one can protect records from deterioration, one needs to understand what deterioration is.

2.7.1 Deterioration

Deterioration refers

to a change of state of any archival material from the original form, caused by the interplay between the object and the agents of destruction. Bio-deterioration is very important for the recycling of organic matter in nature. If not for this, the whole earth crust would have been filled with organic matter. Nevertheless, it becomes harmful when it affects materials with cultural or economic value (Cappitelli and Sorlin, 2005:10).

Paper has been

the main medium for recording human knowledge globally, and its deterioration has been one of the most unappreciated and serious issues for archival materials. Though nowadays readers have access to electronic resources, most of the past records are on paper and many users still prefer to read the print materials (Hart and Liu, 2003:9).

However, a major “disadvantage” of paper is that it is liable to bio-degradation. As Hart and Liu (2003:9) point out, this

leads to loss of artistic value, and sometimes the damage is irreversible. Until the end of the eighteenth century, papers were produced from carefully selected cotton rags, and the papers then were of good quality. However, the change of paper raw materials to wood pulp has resulted in the poor quality of papers kept in archives.

The National Library of Australia (2004:9) states that “the deterioration of archival materials is one of the major crises facing archives throughout the world”. It goes on to say and as alluded to above, “the rate of records’ deterioration is particularly high in tropical countries where factors that make for worse deterioration are at an optimum”. Mwiyeriwa (2000:10) states that “all the factors that cause paper deterioration: physical (acid, heat, humidity, and light), biological (moulds, insects, rodents) and careless handling methods are more pronounced in Africa than elsewhere in the world”. There are archives where records “are taken to the bindery section for repairs; and there are still many more disintegrating records on shelves that have not been identified” (Akussah, 1991:9). Mwangi (1994:9) stated that “there are records in archives in African countries that have pH (a measure of how acidic/basic water is) less than 4, and therefore stand a high risk of acid hydrolysis”. In the

past years, many archives in the African continent have had records that have deteriorated and which were, therefore, in need of urgent treatment (Akussah, 2000:10).

Zyska (1997:9) states that “while considerable efforts have been devoted to research on degradation of archival materials in Europe, there is scarcity of such information on archival materials in Africa”. Sekete (2004:10) is of the opinion that “the rate of deterioration of documents is more alarming in developing countries particularly in Southern Africa due to the interplay of factors not very prominent in developed countries”. He points to the declining financial resources in recent years accounting for the sharp drop in the rate of acquisition of records and journals by archival institutions and that this underscores the importance of archives preserving what they already have in their collections. Majumdar (2005:9), also negative, states that “archives and other heritage institutions are becoming victim to deterioration and are disappearing day by day”.

Ojo-Igbinoba (2000:10) suggests that “tertiary institutions must begin to take seriously the issues of preservation and conservation for them to play the expected roles of preserving the cultural heritage and supporting research”. Olatokun (2008:9) points to a need for a change in emphasis in the direction of research. He notes that while “attention has been paid to research on biological deterioration of archival materials in tropical countries, the bulk of the few studies carried out were on the abiotic or non-biological causes of paper deterioration.” He is of the opinion that there is still “the need for detailed studies of biological agents of degradation of archival materials in tropical countries in order to devise cheap and effective methods of prevention/control against the ravages of the biotic agents”.

Akussah (1991:9) makes the important point that all archival materials will decay regardless of their chemical constituents. He goes on to say that “Deterioration of paper-based objects is essentially the degradation of cellulose. However, even easily broken papers could have durability if they are well protected from deterioration.” Generally, the high temperature and relative humidity of the tropics contribute greatly to increasing the speed of various kinds of deterioration. According to Bansa (2000:9), the causes of paper deterioration can be grouped into four categories:

- Chemical deterioration caused by natural ageing occurs in paper, made with wood pulp sized with rosin in an acidic medium resulting in yellowing and rapid loss of their original structure.

- Mechanical deterioration leads to changes in the structure (size and shape) resulting in cracking, splitting and warping, for example, when bindings become broken or warped resulting from improper handling.
- Incidental deterioration which takes place as a result of accidents such as flooding, fire, and vandalism.
- Biological deterioration is when living agents are involved in the degradation of archival materials.

Bansa (2000:9) goes on to say that the causes of deterioration listed above

could also be grouped into two types: the abiotic and biotic factors. The first three causes constitute the abiotic factors while biological deterioration is caused by biotic or living agents. However, it is pertinent to point out that chemical, mechanical and biological agents act in co-associations, ranging from synergistic to antagonistic to deteriorate paper materials.

2.8 How to prevent deterioration

The archives can prevent the deterioration of records if the following housekeeping issues can be understood and responded to. It is acknowledged that total prevention is impossible and it is more a question of “slowing down” deterioration.

2.8.1 Housekeeping issues

(a) Dust

Fine dry particles of any material present in the air are called dust. Dust, “being made out of soil, tar, metallic substances, fungus spores and moisture among other things, is extremely dangerous for the archival collection. In view of the fact that dust is air borne, it settles down on any exterior of the object” (Sahoo, 2007:107). Maintaining a dust-free environment for storage is an archivist’s ongoing responsibility. Doing so, however, contribute a great deal to the preservation of archival records. Ritzenthaler (1990:6) notes that “Shelves, archives boxes, and the exteriors of bound volumes should be dusted as needed to avoid dirt being transferred to records during handling.” Sahoo (2007:107) describes dust as being “hygroscopic in nature and when it is mixed with high humidity, it is transformed into dirt and if this dirt sticks to the surface of the books, it becomes difficult to remove.” As a

consequence, people working in an archive must be very careful “when dusting archival records that are brittle, fragile, or damaged. Bound volumes with loose covers, missing spine pieces, or delaminated covering material must be handled with special care as well” (Ritzenthaler, 1990:6). Prior to re-boxing the “archival records, the exteriors of storage boxes or envelopes should be dusted with a soft cloth to avoid transferring dirt to records during handling”. It is important to ensure that “records that have not been protected by a closed container be lightly dusted with a soft brush before being placed in new, clean folders and boxes” (Ritzenthaler, 1990:6).

Ritzenthaler (1990:6) makes various important points concerning dust cloths and their usage with certain formats. They should “never be used to wipe textual records or photographs. Such action will transfer the dirt into the paper fibers, abrade the surfaces of photographs, and possibly result in permanent damage. Dust cloths should be used only for wiping shelves and the exteriors of boxes or similar enclosures and bound volumes.” The author goes on to say that paper records that are “dusty and dirty may be lightly dusted with a clean, soft brush of the same type recommended for dusting photographs. Dusting should start at the center of a document and extend out across its edges. Only documents that are in good condition should be dusted” (Ritzenthaler, 1990:6). Sahoo (2007:107) reinforces the problematic nature of dust and dirt noting that they are sources of both “physical and chemical degradation of the archival collection” and that dust acts as “a nucleus around which moisture collects and this moisture provides the necessary humidity for the growth of fungus and for chemical reaction, which leads to the formation of acids.” Documents that are brittle or torn should

not be subjected even to light surface dusting, since this action could cause damage or worsen the existing damage. Dusting only removes loose surface dirt and debris that have not become embedded in the paper; records with entrenched dirt or stains that have unclear textual information should be brought to the attention of a conservator” (Ritzenthaler, 1990:6).

Sahoo (2007:107) makes the point that since dust and dirt are “solid particles of varying size and hardness, they exert abrasion on the surface of the books.” Given this (and acknowledging that books and bound volumes are generally associated with libraries and special collections and not usually with archives), Ritzenthaler, (1990:6) states that the exteriors of bound volumes should be

dusted with a soft, dry cloth or brush to remove surface dirt that could be transferred to the pages during handling. The edges of volumes also should be dusted with a soft brush, making sure that the pages are held tightly together so that dirt will not sift into the interiors of the volumes.

Shelves should be cleaned before refilling storage boxes and bound volumes. It is worthless to dust or replace boxes and clean bound volumes, only to re-shelve them in an unclean environment (Ritzenthaler, 1990:6).

Ritzenthaler (1990:6) provides some advice with regard to speeding up the dusting process by saying that “it may be useful to attach to book shelves small bags containing a supply of clean dust cloths.” Finally, further advice is given for dirty shelving, the re-shelving of records and the cleaning of cloths and brushes:

When shelves are extremely dirty, a damp cloth or sponge may be used successfully. Shelves must be completely dry before records are re-shelved. The work environment should be kept clean. Dust cloths must stop being used when they become dirty, and brushes must be washed with soap and water and air-dried on a regular basis to avoid transferring dirt from one surface to another (Ritzenthaler 1990:6).

(b) Light

Exposing archival material to sunlight is not good at all because its intensity and the high ultraviolet (UV) content is detrimental to paper (Nsibirwa, 2007:26). The UV light is more damaging than violet light (Banks, 2000:118). The damage “takes place when paper is exposed to sunlight in the presence of oxygen” (Sahoo, 2007:106). The presence of oxygen when paper is exposed to sunlight causes:

- Paper to be brittle and weak
- Ink to fade on paper
- White paper to become yellowish/brown
- Coloured papers’ stain to weaken (Sahoo, 2007:106).

Blinds and curtains “can be used to stop light coming in from windows and it is important to turn off lights whenever staff leave the stack rooms” (Nsibirwa, 2012:85). Banks (2000:118)

states that “the amount of damage caused by the light depends on the intensity of light, the duration of exposure and the distance from the source of light”. Sahoo (2007:106) is of the view that “UV filters should be utilized to cover the artificial light and UV glazes or films should be used on windows to filter sunlight coming through.” However, as Banks (2000:18) points out, “eliminating UV does not reduce light damage but reduces the seriousness of harm caused by light” (Banks, 2000:118).

(c) Temperature and relative humidity

Relative humidity is defined as “the ratio of the amount of water vapour present in a given volume of air to the amount required to reach saturation at the same temperature, expressed as a percentage” (Nsibirwa, 2012:85). Temperature on the other hand is defined as the level of heat or cold in an environment and it is measured in degrees Celsius. Controlling both temperature and relative humidity is essential because they contribute to the deterioration of material (Nsibirwa, 2012:85).

Heat and moisture are the major factors in almost every type of decay (Image Permanence Institute, 2008: 12). Ngulube (2003:86) states that it is not easy to control temperature and relative humidity. Nsibirwa (2007:27) points that “the temperature and relative humidity depend on the geographical climatic conditions of the area in which the archive is situated”. There must be a balance of relative humidity and temperature because:

- High temperature with low humidity causes dehydration of cellulose fibres and paper becomes brittle.
- High temperature and high humidity creates a condition for growth of moulds and mildew (Millar, 2010:75).

Adcock, Varlamoff and Kremp (1998:23) state that “there is an extensive scientific evidence to imply that paper will maintain its chemical stability and physical appearance for longer at a constant, low storage temperature (below 10°C/50°F) and relative humidity (30-40%)”. Ogden (2007: 12) states that “extremely low relative humidity which occurs in winter in centrally heated buildings may lead to desiccation and embrittlement of some materials”. Banks (2000:116) states that “records should be stored at lower humidity than has previously almost universally been recommended”.

To control temperature and relative humidity Ogden (2007: 12) states that:

- Buildings should be kept in a good condition.
- As soon as cracks on the wall occur they should be sealed.
- External doors and windows should be kept closed to prevent exchange of unconditioned outside air.
- Windows can be sealed on the inside with plastic sheets and tape in areas that experience cold winter weather.

In order to control the climate, the installation of heating, ventilation, and air conditioning (HVAC) systems is important. There are tools that can be used to control temperature and relative humidity in libraries and archives and they include:

- Thermometers
- Barometers
- Data loggers
- Humidity indicator strips
- Thermohydrographs
- Hygrometers
- Humidifiers/dehumidifiers (Banks, 2000:139).

These tools are important because they monitor and maintain the environmental conditions of the stack rooms even at night and over the weekends when the staff are not there (Banks, 2000:139). However, tools like air-conditioning cannot be depended on alone because they can break down and they are expensive to install and maintain (Ngulube, 2003:85). The important thing is to have a stable environment by having a building design that carefully considers various factors including the use of specific building materials (Nsibirwa, 2012:89).

(d) Air quality and chemical factors

Atmospheric pollution in the form of dust causes damage to archival material (Reitz, 2012:1). Previously, the major pollutants came from the outside environment but now, chemical factors coming from equipment like computers, printers and HVACs systems that are not serviced on a regular basis are causing damage to archival material (Banks, 2000:117). Paper loses its colour and becomes brittle because of the acid caused by gaseous pollutants in the air (Ogden, 2007:1).

(e) Biological factors

If there is moisture caused by high humidity there is growth of moulds or fungi. In addition insects and rodents can infest archives. When both temperature and humidity are not maintained, the biological agents attack paper and other organic material. These agents are known as macro-organisms and micro-organisms (Nsibirwa, 2012:92).

i. Macro-organisms

Macro-organisms are organisms that are visible and they include silverfish, booklice, book worm, cockroaches, white ants, rodents, and people.

- Silverfish

Silverfish are considered to be the most damaging pests because they can multiply quickly and destroy archival material (Silverfishbugs.net, 2014: 12). They are usually found on bookshelves and in basements. Sahoo (2007:108) states that silverfish can damage books and papers by eating small holes in them or by leaving yellow stains. Silverfish have a long life span and some of them can live up to 307 days without food (Sloderbeck, 2004:1).

- Booklice

Booklice “cause damage to archival materials by feeding on microscopic moulds that grow on paper stored in damp conditions” (Ngulube, 2003:96). Maravilla (2008: 12) states that “they cause tiny superficial erosions that are uneven to the outline of paper, leather, gelatine of photographic plates, watercolours, parchment, glue and gum of bookbinding”.

- Cockroaches

Cockroaches are very active at night but they can be seen during the day. They “eat all organic material including paper and fabrics” and they can cause stains which are not easily removed from paper with their watery faeces that are brown/black in colour (Sahoo, 2007:108). Ighinosa (2000:9) noted that “cockroaches are found in all archives in the tropics and they bring about destruction of archival materials with their greedy demand for food”. Plumbe (2000:10) stated that “tropical countries swarm with cockroaches and that the majority of the over 1,200 identified cockroaches were found in the tropics”.

- Termites (white ants)

Termites live in wood and under the ground. They eat paper and wood and other material that contains cellulose. Within a short period of time they can destroy books and do irreparable damage. They can greedily eat all the archival material in the stack room (Sahoo, 2007:108). They can also attack the structure of the building, especially wooden beams and floors (Ngulube, 2003:97). Termites often “cause extensive and often irreversible destruction of records in dark (nocturnal), humid, dirty and cluttered environments” and that such environments offer a “ready food source where they can feed, lay eggs and pupate silently” (Shuhaimi, 2000:10). Shuhaimi (2000:10) provides some further detail concerning termites pointing out that they can

hide in cracks in shelves or inside records where the eggs settle in the gutter between pages.” He goes on to say that “Termites and cockroaches have their habitation in hot climate zones, so if insects such as termites are found in an archive, this is an indication that the condition in the archive is too humid for record storage.

Ighinosa (2000:9) stated that “termites constitute the major problem to an archive’s development and they do irreversible damage fast and secretly”. Dike (2000:10) identified termites as “the only cause of deterioration of historical records” while Harris (2000:9) indicated that “termites are the major factor in the deterioration of bibliographic records”.

According to Shuhaimi (2000:10), termites are capable of

eating greedily the whole archive, and could do so rapidly and completely before the archivist become aware. Wet or damp conditions of tropical countries create a beneficial atmosphere for termites, and the damage they cause is irreversible. The termites also create mud encrustations on the damaged material. Termites can be recognized in the archive by the mud tunnels formed on the walls, book cases and archive furniture.

Plumbe (2000:10) went so far as to describe Africa as the “headquarters of termites” and pointed out that termites feed on cellulose, “which is the major ingredient in papers”.

- Rodents

There are various types of rodents including mice, rats and squirrels. They eat paper and pare their teeth on archival furniture and fittings. They urinate and leave their corrosive droppings on archival material. They can also cause fire by rubbing through electrical insulation (Sahoo, 2007:109). Plume (2000:10) elaborates, noting that rodents such as

rats, mice and squirrels eat and thereby destroy binding materials, adhesives and related materials in archival collections. The rodents are attracted to confined dark places, and they cause much damage to collections that are rarely handled before the destruction is noticed. The rodents could utilize archival materials as food or they can soil and permanently disfigure the collections by urinating and defecating on them. Mice and rats also usually cut into strips and chew up paper materials to make nests. It is also pertinent to note that rodents' invasion of archival materials could expose users to diseases.

- Humans

The carelessness of human beings can cause deterioration. Poor handling of records can lead to new records becoming worn. Nsibirwa (2012:96) emphasises that humans can cause the deterioration of records through the following:

- Poor housekeeping practices that cause dirt and dust which is harmful to records.
- Foodstuff near the archival material.
- Poor ventilation can be the way insects enter into an archive.
- Leaking roofs and cracks not being attended to.
- Carelessly opened windows.

It is also vitally important that reading rooms in the archives play a role in housekeeping and thus in preservation and conservation of archival material. Nsibirwa (2012:98) states that reading rooms should provide users of the archive with:

- Help when photocopying.
- Dirt-free surfaces.
- Gloves when handling valuable archival material.
- Guidelines on how to handle archival material.
- Guidelines on how to use archival material.

Theft and vandalism also need to be considered by the archivist. There must be “recognizable signs of good security-conscious staff to discourage theft and vandalism, and where possible, materials with magnetic strips that interact with archive gates” (Higginbotham and Wild, 2001:39).

ii. Micro-organisms

Micro-organisms cannot be seen by the human eye and one can only see them by using a microscope. They include fungus like moulds and mildew. Bacteria are also part of micro-organisms (Nsibirwa, 2012:98).

- Fungus

Fungus such as mould eats the cellulose of material and cause staining as well as weakening of the archival material. They grow on paper, leather, textiles, walls and ceilings (Sahoo, 2007:108). Fungus belongs to “heterogenous plant organisms” (Sahoo, 2007:108). Moulds are “opportunistic microorganisms of omnipresent nature and the number of identified fungal species is well over one million” (Mueller and Schmit, 2007:10). According to Lugauskas and Krikstaponis (2004:9) mould spores

which are the means through which fungi are spread, are always present in the air. If there is sufficient moisture they may remain in a dormant state for long periods as long as the environment is kept dry by maintenance of low relative humidity. However, the fungi will grow on any organic material as long there is sufficient moisture. Fungal spores are found in both indoor and outdoor air samples, with the two main reservoirs being organic debris and soil.

The authors go on to point out that mould growth on paper materials often “results in the plentiful production of spores, making them visible as blackish, greenish, and bluish on surfaces” (Lugauskas and Krikstaponis, 2004:9). Southwell (2002:10) emphasizes the huge problem that moulds present: their “presence ... on archival collections is second only to the problem of acidic papers.”

The factors that influence “the fungal contamination of buildings and the level of contamination of records include installations and overall maintenance of premises, temperature, humidity, air circulation and the number of visitors” (Lugauskas and Krikstaponis, 2004:9). The other factors are

the age of records materials used in the manufacturing, extent of use, and mechanical damage. As a general rule, higher relative humidity shows a relationship with high mould growth. Wetting of collections, may arise for instance from water disasters, increases vulnerability of papers to mould growth and makes conservation for the future difficult (Aziagba and Edet, 2008:10).

In storage premises where “the larger proportion is filled with records and other archival related materials, there is little air flow and air is almost stagnant; such conditions worsen the mould” (Lugauskas and Krikstaponis, 2004:9). Dust may constitute a source of nourishment for fungi. Small (2003:9) states that “dust could form a micro-environment on surfaces thereby holding back normal airflow, and the large surface areas of small dust particles could absorb moisture.” Southwell (2002:10) warns that

if the growth of fungi is observed in the collection, and immediate steps are not taken to alter environmental conditions or halt its proliferation, the fungi will profusely multiply and digest the archival material on which it has started to grow.

According to Nitterus (2000:10) the fungi “secrete extracellular enzymes that digest papers and book bindings, in that way weakening them.” Rojas (2006:9) stated that

among environmental micro-organisms, fungi constitute the biggest problem in micro deterioration of paper stored in archives. The ability of fungi to degrade paper and other substrates is mainly due to the production of a powerful arsenal of enzymes such as celluloses, amylases and proteases. Fungal degradation of paper causes various kinds of damage depending on the organisms responsible for the attack. Some fungi are often found on papers through the action of cellulolytic enzymes which dissolve cellulose fibres in papers, resulting in rapid loss of strength, or produce pigments or weak acids which causes discolouration and disfigurement of records.

One type of fungal deterioration found on records “is paper foxing, appearing in the form of small, brown or rusty coloured, irregular spots, sometimes having dark spots, resulting from the reaction of mould spores with trace metals found in paper” (Dike, 2000:10).

iii. Control of biological factors

Adcock, Varlamoff and Kemp (1998:31) state that “there is no fumigant which is known to be safe for all collections. Collections may be damaged through contact with the water or oil

based spray”. A pest management programme must be harmless to collections and be able to control a variety of biological agents (Chicora Foundation, 2010: 12). Hunter (1997:144) states that there are various practices that all archives should adopt:

- Ensure that there is no debris in the stack and storage areas.
- Ensure that there are no plants where records are stored and used.
- Ensure that you remove garbage from the building every day.
- Ensure that no one smokes, drinks, and eats in or near archival storage.
- Ensure that you dust shelves, boxes and the exteriors of bound volumes every day.

Knowledge of the “micro-climates in archives stacks and the viability of the fungal invasion are two key factors in evaluating the risk of infections to which records are exposed” (Galo, 1993:9). Tuner (2000:10) notes that in contemporary archives

there are good facilities, especially in developed countries where there is an archive environment with sealed windows, automated heating, cooling and ventilation systems that create safe conditions for the preservation of archival materials.

The author goes on to say that the control of bio-deterioration processes should start with the implementation of strategies that will present conducive environmental conditions for growth of fungi. In view of the fact that high temperature combined with high humidity prevailing in humid tropical areas facilitates the growth of the fungal deterioration of paper, Tuners (2000:10) considers that “it should therefore be possible to prolong the life span of paper by modifying the environment. This will help to make the environment inappropriate for growth of fungal agents and still comfortable for archive users”.

Forde (2002:9) is of the opinion that “climate control and monitoring is one of the keys to sustainable collection management in archives. This could be achieved by the installation of air conditioners that will function the whole time in all parts and rooms of the archive”. This will help because many of the micro-organisms causing deterioration produce offspring under high temperatures (Badu, 2000:9). Badu (2000:9) further states that “relative humidity and temperature should be monitored on a regular basis”.

Singh (2000:10) underscores the importance of air-conditioning stating that

air-conditioned archives have lower fungal spore concentrations than naturally ventilated buildings. The installation and application of air conditioners may be very difficult in some tropical countries due to costs and the shortage of a power supply. In such situations, fans could be installed to circulate air which will remove pockets of high moisture that may take place in “dead spaces” in stacks and collections. It should be noted too that an environment with fluctuations in temperature and humidity level is the most harmful, because under these conditions, archival materials expand and contract, thereby causing their weakening. Mould spores are carried in dust and dirty materials and collections should therefore be kept in enclosures that will keep them dust free as much as possible. In addition, foodstuffs should not be brought into areas where books are kept.

Florian (2000:9) recommended that “the optimum temperature for this purpose should be between 18 and 22°C and humidity should be adjusted below 55 per cent”.

Lugauskas and Krikstaponis (2004:9) point to the need for “good ventilation within the archival premises because an active air flow partially reduces the ability of micro-organisms to function, dries the environment, destroys their structures and removes their propagates from the premises.” The authors also note that it is very important that “any standing water be mopped as soon as it is noticed, and the use of a dehumidifier is recommended. Practically, archival materials could be stored for long durations by putting them in zip lock or heat sealed bags or polythene bags”. They make the point that polythene bags refuse to go along with “changes in temperature and humidity and the chances of mould damage within is minimal except instances where the archival materials going into the bags have high moisture content”. Apart from controlling moulds, “the bagging will also control insects and make the archival materials dust free” (Lugauskas and Krikstaponis, 2004:10).

Shamsian (2006:9) states that archival materials

showing traces of deterioration due to micro-organisms should be removed immediately from circulation and quarantined because these organisms cause diseases that pose risk to human health. In addition, such deteriorating records provide acids that could pollute and deteriorate other paper materials in its vicinity. It is important that devices which could be used for early detection of fungal spores in the archival environments permit intervention at the infection site and at the right moment ... [and

the methods that] ... could be used for routine inspection to detect early mould contamination include macroscopic and microscopic inspection.

Bankole and Abioye (2005:10) also refer to the culture method in this regard. Recent studies have shown that electronic nose technology (an electronic device that identifies odour) could be used for effective monitoring in an indoor environment and for the detection of fungal contamination of archival papers (Garcia- Bustelo, 2009:9).

The control of insects and rodents in archives “can be achieved by following good housekeeping practices: keeping food away, screening windows and doors, screening air intakes and louvers and killing any insects or rodents found in the house” (Akusaah, 2006:10). Akusaah (2006:10) stated that “there can be little insect and rodent damage to records in the archives if the archivist ensures the maintenance of a clean environment and strict regulations on not allowing eating in the repositories”. Adequate lighting of buildings also “makes sure that insects are not attracted. Insecticide formulations can be used to kill insects but the negative aspect is that it could be harmful to people if regulations are not correctly followed and it can cause damaging reactions with paper artefacts” (Akusaah, 2006:10). Therefore, while “there are many chemicals available that will efficiently deal with biological agents, care must be taken to make sure that the ones used do not have a destructive effect on archival materials and that they do not pose hazards to the health of archival personnel and users”. The archival buildings should be inspected on a regular basis and

if necessary, traps could be used to kill rodents. There are also glue boards which could be used to control rodents within archival premises. Rodent baits could also be used to control rats, but their use should be restricted to the exterior of archival buildings because carcasses of rats, if not detected early inside archive buildings, will breed large insect populations (Akusaah, 2006:10).

Preservation criteria “should be incorporated into collection decisions by archival institutions. Archives should employ a collection conservation archivist whose duty will be the physical care of various archival materials”. There is the need “for tropical countries to set up in each archive a unit to carry out inspection and evaluation of possible mould and insect infestations and other visible pests in the archival environment” (Akusaah, 2006:10). The inspection represents “a cost effective method within an integrated pest management programme (IPM)” (Small, 2003:10). The IPM means “the control of pests using integrated and environmentally

friendly methods such as biological control and raising awareness and educating the public, along with minimal use of relatively safe chemical control methods”. The IPM “plans, monitors, and identifies the pest, provides good sanitation, modifies the environment to make it unfriendly to pests, and also embarks on treatment action when deemed fit” (Small, 2003:10).

The inspection team should

regularly look for harbours of insects, improper storage methods, moulds and other conditions that could promote the increase of biological agents of deterioration. More importantly, older documents acquired through donations or purchase should first be assessed, and if need be, quarantined and examined by specialists (Tuner, 2000:10).

In addition, Tuner (2000:10) states that “it is important that personnel who carry out this assignment have been well trained on biological agents of archival materials, their habitats, and the hazards they constitute to collections”. Tuner (2000:10) goes on to say that in line with the practice in the developed world,

there is the need for archives in the tropics to set up preservation departments where cases involving biological infestations of archival materials could be handled by experts. Also, archives should collaborate with scientists in the relevant discipline, for example, entomologists to deal with insects and mycologists to deal with moulds, to be able to devise appropriate preventive and treatment strategies against paper deterioration.

The biological factors are dangerous to archival records, however one has to be careful when using the records because minor things done by the user can damage records. These things are discussed below.

(f) Storage of archival records

i. Boxes

If it is unknown whether or not the box is acid free, it should be changed (Murtagh, 2004:5). Boxes that “are physically damaged and no longer capable of keeping archival material should be replaced with new storage containers” (Ritzenthaler, 1990:1). It is vital to check the pH and alkaline levels in boxes to determine whether they should be

replaced with acid-free boxes (Ritzenthaler, 1990:1). Also, boxes should be changed after approximately 10 years, or when the boxes weaken as they lose their ability to absorb acid and protect the documents (Murtagh, 2004:5).

ii. Shelves

The first step in carefully storing bound volumes is to make sure there is adequate shelving. If the shelving is not sufficiently strong, shelves can bend over and the whole unit can become unbalanced. Some shelving units contain by-products that add to the deterioration of collections or have uneven surfaces that can be rough (Murtagh, 2004:2). To side-step damaging bindings, records need to be shelved upright and supported. Non-damaging bookends with smooth surfaces and broad edges avoid bindings from being grinded down and leaves from being torn or creased. Records should not be shelved so tightly that they are damaged when they are removed from the shelf (Ritzenthaler, 1990:3). (Once again it is acknowledged that bound volumes are not usually associated with archives.)

iii. Folders

Folders will not only help provide support for records, but will also serve to organize the items in the box (Murtagh, 2004:2). Loose records that are stored without folders need to be placed in acid-free folders for support and protection. It is essential to ensure that folders that are physically damaged and no longer capable of keeping archival records are changed (Ritzenthaler, 1990:2). They also need to be verified for pH and alkaline levels to determine whether they should be replaced with new folders. Records must be placed in acid-free file folders that are big enough to accommodate them safely.

iv. Oversize records

According to Murtagh (2004:2), paper records that do not accurately fit into their folders, boxes, or other containers without being rolled should be considered oversize. These include maps, drawings, blueprints, posters, large ceremonial documents, lengthy petitions, and other records that may have been previously folded or rolled to allow them to fit into a certain container.

Trying to place oversized materials “into normal sized boxes can damage the materials or cause them to bend or twist” (Murtagh, 2004:2). Oversize records “may become curved,

pleated, or otherwise slanted if they are in folders and boxes that are very small” (Ritzenthaler, 1990:3). The author goes on to say that oversize records “must not be trimmed to make them fit into filing or storage containers. It will be vital to remove oversize records from their original containers and stored flat in folders within map cases or in oversize document boxes that will fit on existing shelving” (Ritzenthaler, 1990:3).

v. Folded and rolled documents

Ritzenthaler (1990:4) stresses that the archivist

must be very cautious when handling tightly rolled or folded records, particularly if the paper is weak, stiff, or brittle. If those documents are forced open, they may break or tear. If records resist, the archivist must gently attempt to open them, and they should be left in their folded or rolled state until they can be humidified and flattened by a conservator.

The archivist, however, may

carefully open folded documents flat if the paper is strong and flexible and if it is clear that the documents will not break or crack along fold lines during the process of opening them. Folded documents should never be back-folded when trying to flatten them. Instead, a document should be opened on a table top and the crease gently smoothed flat with clean finger tips (Murtagh, 2004:4).

vi. Photographs

Photographic materials “that are to be preserved within files of written records should be placed in polyester sleeves” (Murtagh, 2004:6). At the same time,

as good quality paper envelopes and sleeves provide proper storage for photographic materials in many situations, polyester sleeves are more appropriate in instances where photographs are interfiled with textual records and which will be provided to researchers without gloves or other handling or viewing aids. Polyester sleeves enclosures allow immediate visual access to images without the need for researchers to remove photographs as they must do from opaque paper enclosures (Murtagh, 2004:2).

Focus now shifts from housekeeping issues to a crucial component in the effective and efficient functioning of the archive which would include both preservation and access, namely, the training of staff.

2.9 Training of staff

Training is

a systematic process of changing the behaviour of the staff to ensure that organizational goals are achieved. Information professionals, irrespective of their positions at work, must be trained. The training programme should reflect the basic knowledge for the job which usually comes from education. A good training programme should include skill and experience acquisition (Ekwelem, 2011:4).

Archivists are also information specialists and information brokers. Graduates and post graduates “coming from the library schools generally do not have sufficient skills and expertise to work confidently with information technology (IT)” (Ekwelem, 2011:4).

Ngulube (2003:316) states that “there is a critical shortage of staff with expertise to preserve records and archives in South Africa”. Nsibirwa (2012:224), more recently, adds that the staff involved in preservation and conservation activities might not have been trained in major conservation processes.

Akussah (1991:10) stated that “lack of training and awareness is a major factor that contributes to deterioration of archives and public records and recommended the training of information professionals and users of archives”. Nwokedi and Nedosa (1999:9) opined that “the knowledge of factors causing deterioration of archival materials is vital to understanding why certain activities must be carried out on a long-term basis to retard their degradation”. Kenyengo (2009:10) stated that “despite the fact that some archives have preservation departments, their activities are restricted only to book and journal binding”. Writing 15 years ago, Coates (2000:9) stated that no formal training was offered on preservation in Africa, despite the fact that there were several short courses that were provided. Akussah (2005:9) and Alegbeleye (2008:10) recommended that “the archival and information schools should provide formal education and training on conservation and preservation of archival materials”.

Akussah (2005:9) notes that “the training could be carried out through in-house and continuous education programmes such as workshops and seminars”. Olatokun (2008:9) is of the opinion that “for the successful implementation of conservation and preservation programmes, there should be adequate and trained manpower who are information professionals that understand the physical and chemical nature of the materials in the archival holdings”.

In addition to the training of staff, there is also the need for the regular training of users on proper handling methods. Walker (2008:10) recommended that “the archive staff must be available to keep watch to intervene when harmful practice is noticed”. Gaba (1995:10) emphasized “the inculcation of a preservation culture in both staff and users, and that archival personnel and management should consider the preservation of archival materials as an important part of archival practice”.

In South Africa, formal training is very limited and there is only theoretical training. There is no practical training offered in the institutions of higher learning. This means South African records and archival graduates need to apply for internships to get practical training (Dominy, 2010:3).

Many archives have disaster plans but they have not been reviewed and staff are not well trained for an occurrence of a disaster (Ngulube, 2005:2). Disaster management guidelines are discussed below and “they should include prevention, preparedness, reaction and recovery” (Ngulube, 2003:110).

2.10 Disaster management

Disaster management includes a disaster preparedness and response plan which in turn includes experts and people who can help in the event of emergency. Preventative measures are very important for an archive to avoid the event of a disaster. A disaster is an unexpected event which has destructive consequences for the archival material and people (Sahoo, 2007:113). There are natural disasters and human made disasters. Natural disasters include hurricanes, floods, earthquakes, volcanic eruptions, sandstorms and tsunamis. Human made disasters, on the other hand, include “acts of war and terrorism, fires, broken pipes, leaking

roofs and chemical spills” (Nsibirwa, 2012:103). Sometimes “it is impossible to prevent a disaster but it is important to be prepared for them to reduce their effects” (Sahoo, 2007:113). Disaster planning is very important because it helps the archivist and people who work with records to respond quickly if there is an occurrence of a disaster (Nsibirwa, 2007:36).

Nsibirwa (2007:36) states that disaster plans are important for:

- Reducing the economic effects of the disaster.
- Reducing the disturbance of normal operation.
- Providing for the quick restoration of service.
- Training of staff.

Archivists need to be prepared for all types of disaster (Nsibirwa, 2007:37). There are regions like South Africa where tornado strikes take place (United Nations Environment Programme (UNEP), 2009: 12). According to Nsibirwa (2007:37) global warming increases the spread of pests and diseases and shifting weather patterns increase the risk of flooding. The occurrences of climatic disasters like floods and cyclones have increased more than earthquakes and certain earthquakes create tsunamis (UNEP, 2005: 12).

South Africa has experienced flooding in many areas across the country, such as Gauteng and KwaZulu-Natal, because of heavy rains caused by El Niño (Nsibirwa, 2012:107). Ngulube (2003:115) states that “in order to prevent water damage material should always be stored at least four inches above the floor, never directly on the floor”. Archives, he continues, “should not be built in areas that are prone to flooding and the archivist should inspect the building for leaking pipes, dirty gutters and blocked drains to avoid unnecessary disasters” (Ngulube, 2003:115).

Ngulube (2003:112) states that “fire totally destroys paper records”. In order to prevent this, “archives need to install smoke detectors, sprinkling systems and have working fire extinguishers as well”. The smoke usually “moves through the entire collection and leaves a smell on the materials, including a thick, dark, oily film that can be hard to remove”. The flames cause paper to become brittle from heat and warped (Nsibirwa, 2007:38).

In disaster preparedness, “one can identify and reduce the risks created by the building, its equipment and fittings, and the natural hazards of the area. In addition, one must carry out a building check-up, connect automatic fire detection and extinguishing systems, and water-sensing alarms” (Sahoo, 2007:123). It is also important to be prepared for the disaster and this is achieved by “developing a written preparedness, response and recovery plan”. Additionally, the archive should “establish and train an in-house disaster response team”. In order to respond to a disaster, it is essential to “contact the leader of the disaster response team to direct and brief the trained salvage personnel”. Furthermore, it is important “to set up an area for recording and packing material which requires freezing, and an area for air drying slightly wet material and other minor treatments”. The recovery plan must “establish a programme to restore both the disaster site and the damaged materials to a stable and usable condition”. It will also be necessary to analyze the disaster and improve the plan in the light of experience (Sahoo, 2007:123).

Archives hold rare and unique materials that are irreplaceable and institutional adaptation to climate change is critical to the survival of these resources. The earliest effects of climate change are likely to be increased weather events that threaten the physical safety of holdings (Ngulube 2003b:58). Hurricanes, floods, and fires pose particular risks to archives due to potential damage to buildings as well as from limitations of local infrastructure to rapidly respond to disasters. Disaster preparedness for archives needs to include planning responses to a wide variety of situations that threaten holdings (Varlamoff and Plassard, 2004:27). As societies begin to adapt to climate change, archivists should consider how values of sustainability and resiliency might inform archival practice (Varlamoff and Plassard, 2004:27).

Disaster management is very important when working with records. It is also necessary to consider the safety of records in an archival institution. The security issues are discussed below.

2.11 Security

According the Ngulube (2003:115), the best way to “protect archival material from vandalism or theft depends on creating the right balance between access and security”. In this

regard, the author continues, many archival institutions employ guards to assist in preventing criminal activities. However, as the author points out, there is “no system that has been found yet that will absolutely replace a loyal and well-trained team of security guards” (Ngulube, 2003:115). When determining how many security guards are needed to protect the archival material, the following need to be considered:

- The nature and use of the building;
- The value of the material;
- The number, size and design of the corridors;
- The number of visitors and the services provided;
- Responsibilities of the other staff that are behind the scenes in offices and stores (Ngulube, 2003:115).

The ability of alarm systems to detect intrusion or fire does not mean that 24-hour manned guarding is not essential. Even when a night guard is employed, modern practice is also to monitor the building electronically and by close circuit television (CCTV) rather than by regular patrol alone. The benefits of CCTV include the following:

- It acts as a deterrent.
- It can enable attendants to be deployed more effectively.
- Recordings can assist in post incident investigation.
- It can be used to assist with entry control arrangements into non-public areas.
- It can provide more general information to assist in the management of the premises (Council for Museums, Archives and Libraries, 2003:10).

The archival staff members should be identifiable to users. They have to wear at least name badges that will assist users to be able to identify them when seeking advice (Council for Museums, Archives and Libraries, 2003:10).

Disaster management and ensuring the security of records is vital when preserving records. However, it is important to consider the condition of the archival building where records are preserved. The archival buildings are discussed below.

2.12 Archival buildings

Archival buildings are facilities that

provide a proper environment for the purpose of storing records that require permanent protection. Archives must be designed to operate permanently at a very high level with zero tolerance for failure. The often irreplaceable nature of the materials to be permanently stored and preserved in this type of building requires a life-cycle analysis and approach to its design and construction, with extensive redundancy in its building systems (Ngulube, 2003:102).

According to Ngulube (2003:112), a building “that has been specifically designed to store and preserve archival material to prolong the life span of the material is called a purpose built building which has proper architectural properties for the storage of material.” Nsibirwa (2012:76) lists important issues that need to be considered for the archival building:

- Fire protection for archival material.
- Access to the archival material must be controlled.
- There must be secured and safe loading and receiving areas.
- There must be secure and controlled access to the public.
- There must be day lighting for the staff but not that which will harm the archival materials.
- The staff and visitors must be safe.

A purpose built building is good for many reasons. Dewah and Mnjama (2013:56) state that “archival and records centre buildings need to provide adequate facilities for the protection of documents against damage or deterioration”. Nsibirwa (2007:34) notes that

if a library or archival institution has been well designed for preservation, it will have the features that affect environmental conditions like a HVAC system, proper insulation and well-designed windows installed during the construction.

Archival management should work together with “architects and engineers, to have a good structure built” (Baird, 2003:4). This reduces the negative impact of bad climatic conditions on archival institutions (Banks, 2000:126).

There are also adapted buildings and they are called non-purpose made buildings. These buildings have been converted into archives. They do not necessarily have good facilities for preservation and access of materials and they may experience electrical problems and leaking pipes (Banks, 2000:136). The problem is that some of these buildings cannot be changed because they are historic buildings and thus protected by law (Feather, 2004:6).

Nsibirwa (2012:77) states that the site for a repository building should not be:

- In the neighbourhood of a place that attracts rodents, insects, and other pests.
- In the neighbourhood of a place that has harmful gases, smoke, and dust.
- In a polluted area.
- At risk from events such as flooding, earthquakes, tidal waves or landslides.
- In the neighbourhood of a place that is targeted in an armed war.

Creating a double wall structure in the building and storing material in internal spaces with staff and other functions around the perimeter of the building can reduce the effects of outdoor temperature (Banks, 2000:125). Piping and windows in stack rooms should be avoided (Banks, 2000:126). The archival building

must be designed to accommodate the loads of the materials to be stored; the sensitive environmental needs of different materials to be permanently stored and preserved; the functional efficiency, safety, security, and comfort of the visiting public and operating personnel; and the protection of the archived materials from fire, water, and man-made threat (Feather, 2004:16).

Dewah and Mnjama (2013:56) state that many public archives in southern Africa are adapted buildings and they do not have enough facilities for the protection of records against damage or deterioration.

Conservation and restoration are important activities in preservation because they are responsible for the maintenance and repair of archival material. Conservation and restoration issues are discussed below.

2.13 Conservation and restoration

Conservation includes prolonging the life span of material through physical or chemical intervention using stable materials and appropriate techniques of treatment for records (Millar, 2010:74). Conservation can be considered as both preventive and remedial. Through preventive conservation, deterioration is indirectly delayed and prevents damage by creating conditions best for preservation of archival material. There is also remedial conservation that takes place in order to delay further deterioration.

Restoration includes specific ways to return records and archives as closely as possible to their original condition (Millar, 2010:75). Millar (2010:75) states that “restoration is often undertaken when the look of an item is important and there is no danger of altering the authenticity of the original”. Restoration depends on diagnostic examination which involves recognition of the composition and condition of material. Restoration also includes de-acidification, leaf casting, encapsulation, and lamination (Nsibirwa, 2012:111). The archivist in South Africa needs to practice preventative preservation to reduce the need for conservation because it is very expensive (Nsibirwa, 2007:39).

While the preservation of records is very important it is, however, irrelevant if records are not accessible. The relationship between preservation and access is discussed below.

2.14 The relationship between preservation and access

Preservation and access work together and do not contradict each other (Ivey, 2004:3). UNESCO (2002:3) explains that preservation and access not only go together but also promote awareness because access demands encourage preservation work. According to UNESCO (2002:3), archives “preserve their collections, not for preservation’s sake but to provide easy access to these collections for future use”. Ngulube (2003:1) explains that “preservation as a collection management strategy is key to long-term access to records and archives”. This confirms that preservation is nullified if access is prevented (Feather, 2004:8). In turn access is negatively impacted if preservation is neglected.

Access to archival records is discussed below.

2.15 Access to archival records

Access to archival records has been “well-defined” by various scholars in different ways and has also been defined and briefly discussed in the preceding chapter. According to Moyo (2001:35), “access is the ability to use archives for consultation and research in the jurisdictions of the country’s legislation”. Hunter (1997:25) defines access “as the right to obtain information from or do research using archival materials”. Using archives compromises their preservation. However, as Moyo (2001:35) notes, and has been stressed above, preservation without access is useless.

Abioye (2009: 2) outlined “the historical transformation of archival accessibility”. He confirmed that “in the past access to archives was restricted to the creators and their legitimate successors. Archives at this time were considered as arsenals of law. The focus has since shifted with the gradual liberalization of access” (Abioye, 2009: 2). In the ancient days for instance, “public records were preserved in strict secrecy and under close protection. Such recorded information materials were reserved in locked rooms, sacks, boxes, crates, shrines and even the treasury but the public access was not allowed” (Maidabino, 2010: 4). However, “shortly before the end of the eighteenth century A.D, the French Revolution launched the modern era in the history of archives particularly in the areas of legislation, preservation and public access through the French Archival Act of 1794” (Maidabino, 2010: 4).

Historical research in southern Africa is in grave danger because of many impediments to accessing primary data contained in archival records (Ngulube, 2002:562). Ngulube (2002: 130) and McKemmish, Reed and Piggott (2005:130) emphasize that

challenges facing access to archival records by the public date back to the ancient Greek Metroon, when archives were the privy of kings and rulers only. Before the nineteenth century, access to archives was strictly controlled and limited.

Archives were only made accessible to their creators or researchers officially commissioned to write about historical events of the creators of records. The major reason for the existence of archives was to serve the legal and constitutional needs of their creators. As a result, the main role of the archivist was to provide effective and efficient access to the records and

archives by their owners. Ngulube (2002: 130) and McKemmish, Reed and Piggott (2005:130) further assert that “the rationale that the archives were for the privileged class only changed with the beginning of the French Revolution in 1789, after which the archives were declared open to the public. Facilitating access and use of archival materials is important to all archival functions, such as acquisition, accessioning, appraisal, arrangement, description and preservation”.

All the functions listed above are undertaken to facilitate access to the information contained in the archives for present and future generations. Ngulube (2002:31) also highlights “the need for archivists to promote access to their holdings if they are to remain relevant in a changing archival landscape”. Moyo (2001: 25), Evans (2007: 2) and Murambiwa and Ngulube (2011:36) hold that “archivists are bound to fail to make archival records accessible if the materials are not processed as a result of accumulated backlogs”. The authors go on to list various other factors which inhibit access:

...if the equipment to access archives is obsolete; if finding aids do not exist; if there is no legal authority to access information; if physical access to archives is difficult; and if there are systematic barriers to accessing information contained in the archive.

It was in the interest of access that the International Council on Archives (2012: 9) adopted the Universal Declaration on Archives at the Annual General Meeting in Oslo in 2010 to address the need for archives to be made accessible to everyone in need of them, but with respect to the relevant laws and the rights of individuals, creators, owners and users.

Hunter (1997:5) asserts that “access to information is indispensable in a contemporary society”. He argues that “reference services depend to a large degree on good record-keeping by government agencies”. Kilasi, Maseko and Abankwah (2011:4) point out that “a public archival institution has a legal obligation to provide access to their collections and that the significance of an archival establishment is best measured by the services it provides to its clientele”. Murambiwa and Ngulube (2011:4) state that “access to information is a democratic right of every citizen and that acquisition and preservation of archival material without provision of access to them is a futile exercise”.

Even though access has been viewed as

a democratic right of every citizen and has been universally accepted in all democratic societies, the concept of privacy indicates that there are spheres of personal matters and spheres of public matters and that the archivist and society should protect both.

According to Ngulube (2001:4), “personal matters include medical records (including psychiatric information), sexual information regarding birth and legitimacy and any embarrassing facts about individuals.” The author further holds that “public matters include protection of defence, public safety, public order, and economic interest of the country, public morality and public health”. In this regard, Moyo (2001:5) observes that “access restrictions are imposed to protect both personal and public matters and are also imposed to protect the reputations, rights and freedom of other persons and their private lives.” Ngulube (2001:4) further outlines that “access restrictions are also imposed as a result of the physical condition of documents. For example, fragile and torn documents cannot be used by researchers as this may further worsen their condition”.

Excessive handling of such records inevitably causes wear and tear (Moyo 2001; Ngulube 2001). In order to minimise wear and tear, the institution puts in place rules of access, such as:

...no inkbottles; no food nor drink to be taken into the reading room; ensure that hands are not dirty, greasy or sweaty as they leave marks on the documents; only pencils are allowed as ballpoint inks cause a danger of documents being permanently marked or stained; do not write on or deface the documents – only write on pieces of paper with a pencil and do not moisten fingers when flipping over pages (Hunter 1997:4).

Information is “the currency of democracy. It allows for individual members of society to be able to assess the success and failures of government programmes, to be able to claim their rights, and to discuss the issues of the day” (Maidabino, 2010: 4). Cunningham and Philips (2005: 2) state that in order to ensure that the right to access archival records is fulfilled “citizens must have access to current and historic (archival records) sources of information generated by government and by other sectors such as academia and private enterprise”. This means that “access to information distributed by public archive agencies is an essential requirement for the continued survival and transformation of the local country in particular

and the world in general” (Maidabino, 2010: 4). Maidabino (2010: 4) states that “the availability, proper description or organization and use of archival records will no doubt influence the effective roles of archival records in terms of societal transformation, and this also remains an important aspect of consideration and exploration in archival administration”. The reason for “selecting, acquiring and preserving archives is to make them available for use. Intellectual and physical accessibility are fundamental components of managing these important information resources” (Jimerson, 2003: 1). The users of archival resources are diverse. Jimerson (2003: 1) points to “a broad array of public archival clienteles to include administrative staff of the institution, scholars, genealogists, local historians, legal researchers, specialists in one or more professional disciplines, college or school students, and hobbyists”.

UNESCO (1976: 6) declared that “information resources in archives should not only be made available and accessible to the public at individual level but also at national and international level”. Access to the archives and the records they house is very important for an informed community. All public archives should be open to all citizens unless there are exceptions grounded in law that deny access. However, it is not compulsory for private archival institutions to open their archives to external users unless there is a law that imposes this responsibility on them (International Council on Archives, 2012: 8). An informed society could also act as a protector against corruption within and outside of government. Access to accurate information that is found in the archival records could also promote peace and tranquillity within any society in the sense that it could act as a verification against rumours and half-truths, which can cause violence (African Network of Constitutional Lawyers, 2011: 4).

As noted in Chapter 1, many archivists emphasize that “opening institutional archives helps to maintain institutional transparency and credibility, improves public understanding of the institution’s history and its contributions to society” (International Council on Archives, 2012: 8). Archives that give the public access to all their records are required to publish an access policy (International Council on Archives, 2012: 8). They start with the presumption of openness and if there are restrictions they must be clear so that people will be able to understand them. Users have a right to know whether a record or a file exists even though it is withheld from use or has been destroyed (International Council on Archives, 2012: 8). It is commonly understood that information is power. Therefore, it is important to allow people to

access archival records and the information they contain. The right of the public to know is basic in any society that is governed by the rule of law. The provision of precise information grants people with the data and knowledge that they require to take part efficiently in the democratic process in any political society (African Network of Constitutional Lawyers, 2011: 3). Information contained in archival records can enable individuals to make good choices about their lives and livelihoods, therefore, promoting the basic right to life, among others. Additionally, an informed society is likely to contribute to the economic development of any nation compared to one that is ignorant. This contribution could be in the form of ideas (African Network of Constitutional Lawyers, 2011: 4).

It is a professional responsibility of the archivist

to promote access to archives. Through the use of the internet, web-based publications, print materials, public programs and commercial media the archivist should ensure that information about archives is available. While archivists provide the widest possible access to archives they recognize and accept the need for some restrictions (International Council on Archives, 2012: 9).

They also “ensure that the access policies and rules for their institution are published so that the restrictions and the reasons are clear to the people” (International Council on Archives, 2012: 9). This restriction is imposed “for a short period of time or until a certain condition has occurred like the death of a person whose material has been archived”. There may be restrictions within the institution for the protection of personal data and commercial secrets. Access to donated records can be limited by conditions (International Council on Archives, 2012: 9).

The access rules should apply equally to all people without discrimination. Archival institutions provide equal access to users but there are certain constraints that may require the archivist to make distinctions between researchers (International Council on Archives, 2012: 9). For example,

people who need access to archives for human rights purposes are given access to the relevant archives even if access is denied to the general public. Public archival institutions do not charge admission fees to people who want to do research. Archivists have access to all records in their custody in order to preserve, arrange and describe them. They help their institutions to establish access policies and they work

with lawyers on the interpretation of restrictions (International Council on Archives, 2012: 9-11).

Equal access does not mean that

the entire materials are open to research use. It is the responsibility of archives to balance the researcher's need for access with the needs for confidentiality of persons and institutions whose deeds are shown in the records. Consequently, the use of some materials in archives, especially those of recent date, is subject to restrictions imposed by the archive and the donor (United Nations High Commissioner for Refugees, 2001: 1).

Access to archival records is very important for everyone. People with disabilities have information needs like those who are not disabled. They also use archives for different purposes. It is very important for the archive to be user friendly for them. Access for people with disabilities is discussed below.

2.16 Access for people with disabilities

According to Irvall (2005: 4), everyone should

be able to use the archives of a country and the environment of the archive should thus be accessible for persons with different types of disabilities. A person in a wheelchair should be able to get to all departments, a visually impaired person should be able to walk with a cane or a guide dog and find his/her way without bumping into any obstacles. A deaf person should be able to converse with archive staff. A person with an intellectual impairment should be able, without difficulty, to find archival materials. A person with dyslexia or other reading problem should be able to find a way of accessing information.

The aim of access "should be to lower the intellectual, physical, and psychological barriers to archives so that as many people as possible can read, touch, learn from, and enjoy those records that clarify the past experience" (Maidabino, 2010: 3). People with disabilities should be able to arrive at the site, be able to come near the archive building and enter the building without difficulty and safely. If the main entrance cannot be made accessible,

a secondary accessible doorway should be made available, equipped with automatic door opener, a ramp, and a telephone (Irvall, 2005: 4).

Irvall (2005: 4) further states that facilities needed outside of the archive should include:

- Adequate parking spaces marked with the international symbol for the disabled.
- Parking must not be far away from the archive entrance.
- Signposting must be clear and easy to read.
- Open and well lighted access paths to the doorway.
- Smooth and non-slip surface at the doorway.
- Railings at both side of ramp.
- If necessary, a non-slip and not too steep ramp with railings next to the stairs.
- Entry phone available for deaf users.

Someone on a wheelchair or using crutches or a walker should be able to come in through the door and pass through security check points. Irvall (2005: 5) states that:

- There must be adequate space in front of the door to allow a wheelchair to turn around.
- There must be automatic door opener reachable by a person in a wheelchair.
- Glass doors must be marked to warn visually impaired people.
- There should be no doorsteps -- for easy wheelchair access.
- Stairs and steps should be marked with a contrasting colour.
- There must be pictogram signs leading to elevators.
- There must be well lighted elevators with buttons and signs in braille and synthetic speech.
- Elevator buttons must be reachable from a wheelchair.

Irvall (2005: 5) notes that

all parts of the archive should be accessible. The space should be reasonably arranged with clear signs and a floor plan posted close to the front entrance. Service desks should be found close to the front entrance. Wheelchairs should be able to move around inside the whole archive. There should be a lift for wheelchairs or a ramp, if the archive has more than one level. There should be no doorsteps and all doors should have automatic openers. Archives must be committed to equal terms of access.

Maidabino (2010: 3) states that “a repository should not deny access to materials to any researcher, unless required to do so by statutory authority”. In other words, “archives must do away with rules that make a distinction between categories of researchers”.

Preferably, according to Irvall (2005:5) “shelves should be accessible from a wheelchair. A particular number of tables and computer workstations should be adapted for people in wheelchairs. At least one toilet for disabled people must be available”. Irvall (2005: 5) goes on to state that the following should be at an information desk:

- Adjustable desk for people who use wheel chairs.
- Chairs prepared for elderly and disabled people.
- Induction loop for hearing impaired people.
- Accessible self-service circulation stations [not applicable in an archive].
- An organised queue system in the waiting area.

Dewah and Mnjama (2013:56) have pointed out that many public archives in southern Africa are adapted buildings and they do not have adequate facilities for disabled people.

2.17 Access rules

Providing access to the information received and preserved by an archival institution “is essential to the delivery of archival programmes. It is only when records get used that archives can best demonstrate their usefulness to society” (Maidabino, 2010: 3). It is not sufficient to know that “there may be relevant or interesting information in archives; users must be able to retrieve and consult that information given that we are in an era when information has become a valued commodity” (Maidabino, 2010: 3). Setting up “the rules under which users may gain access to records is a most important building block for any researcher access programme. There are principles that should be respected when access regulations are developed” (Maidabino, 2010: 3).

The James Hardiman Archive (2014:4) in Ireland states that:

- Researchers must use the archival material in the special collections reading room under the direct control and supervision of staff.

- Researchers must not carry their personal possessions into the reading area, apart from items for taking notes and small handbags. Use only pencils for note taking. The use of lap-tops is also officially recognized by agreement with the staff.
- Things that are liable to cause damage to documents are prohibited, like food, drink, pens, markers, ink, sharp instruments, erasers, correction fluids or bonding agent of any kind.
- Photocopying is by request only, and will involve an evaluation by staff to see if it is feasible, with the preservation needs of the item taking precedence.
- Researchers must take care in maintaining the order of material they consult.
- Researchers must handle the archival material with great care. They must not mark, fold, annotate or tear documents in any way.
- Researchers must ask for the written permission of the archivist prior to publication of material from the archival holdings, and the source must be acknowledged.
- The Archivist reserves the right at all times to remove the archival material from use, when such use would harmfully affect the physical preservation of material.

South African public archives have the conditions similar to the above in order to make sure that records are used properly (Harris 2002:78).

There are laws that govern access to information in South Africa. These laws are discussed below.

2.18 Legislation underpinning access to information in South Africa

One of the basic rights granted by the South African Bill of Rights is “access to information” and it is found in section 32 of the Constitution (Constitution of South Africa: section 32). Nsibirwa (2007:16) states that:

The Bill of Rights gives everyone the right of access to information held by the state, and information that is held by another person and that is necessary for exercise and protection of any rights.

The Bill of Rights is a “cornerstone of democracy in South Africa. It protects the rights of all people in the country and affirms the democratic values of dignity, equality and freedom” (Nsibirwa, 2007:17).

In terms of access to information a significant piece of legislation that was passed by the South African Parliament is the “Promotion of Access to Information Act 2 of 2000” (PAIA). The purpose of the PAIA is:

to give effect to the constitutional right of access to any information including the archival records held by the state and any information that is held by another person and that is required for the exercise or protection of any rights (Promotion of Access to Information Act 2 of 2000).

The PAIA is one of the few pieces of “access to information legislation in the world that applies to both public and private bodies as well as to records, not considering the date when the record was created” (McKinley, 2003: 5). It also “applies to the exclusion of any provision of other legislation that prohibits or restricts the disclosure of a record and is materially inconsistent with an object, or a specific provision of this Act” (Promotion of Access to Information Act 2 of 2000).

The PAIA “sets out a wide range of facilitating provisions for information seekers. The PAIA also provides for the Human Rights Commission to play an important role in assessing, monitoring and implementing a variety of aspects of the legislation” (McKinley, 2003: 5). Like South Africa's constitution, “the PAIA has been generally lauded both at home and out of the country. It is, by worldwide legislative standards, a fairly radical law, or as one archivist called it, the golden standard” (McKinley, 2003: 5).

In the case of South Africa, it has also been discovered that the full impact of the Promotion of Access to Information Act (PAIA), No. 2 of 2000, on providing access to lack of empirical evidence. Statistics on the use of the Act to access information are just not available. It is apparent that archival legislation remains the backbone of accessing public archival records in southern Africa (Harris, 2002:570).

Administering access is an important archival function. Archival legislation in southern Africa emphasizes the right of the public to inspect public archives of a certain age subject to the provisions of any other Acts of Parliament. In conformity with intercontinental norms, access to public archives in southern Africa can be restricted on the grounds of national security, maintenance of public order, public morality, and public health, safeguarding the

revenues of the state, or protection of the privacy of living individuals (Mnjama, 2016:570). Any restrictions imposed, though, must not exceed those which are reasonably justifiable in a democratic society. The prerequisite to balance the right to access with all these restrictions is the major challenge facing the archivists. Nevertheless, the existence of “legal authority to access information does not guarantee physical access. Access to information can be totally denied by virtue of the absence of means of locating it” (Harris, 2002:570).

Restricted access periods are a common feature of archival legislation in countries of southern Africa. An outline of archival legislation of countries in southern Africa underscores a uniform approach towards access to public archives. Many public archival records have a closed period. That means that public archives are available for public inspection after a specified period of time from the date in which they were created. A researcher wishing to access government archives or records which fall within the ‘closed’ category can make an application for special access (Mnjama, 2016:571).

2.19 Other legislation impacting on access to information in South Africa

- Protection of Information Act 84 of 1982 (PIA)

The PIA

is the principal statute restricting access to information including archival records in South Africa today. It was enacted at the height of apartheid, at a time when government was obsessive about secrecy and neglectful of basic human rights. As is the case with many of the secrecy laws of this era, PIA imposes strict limitations on the accessibility of government-held information (Protection of Information Act 84 of 1982).

This apartheid section of legislation can still be found on the statute books. As could be expected, “the approach to the protection and distribution of information contained in PIA is informed by the demands of an authoritarian and secretive apartheid state” (McKinley, 2003:7).

- National Archives and Records Service of South Africa Act (Act No 43 of 1996 as amended)

The Act grants that “only archival information that is more than twenty years old should be made automatically accessible to the public, but provides the National Archivist with the power to identify records that might be made accessible earlier (with consideration for protection of privacy)” (McKinley, 2003: 7). Harris (2002:78) emphasizes that

the National Archives of South Africa Act accords the National Archivist full managerial and professional responsibility, but in the context of a delicate balance of power and accountability with Parliament, the National Cabinet Minister is responsible for archives and the National Archives Commission.

- Protected Disclosures Act 26 of 2000 (PDA)

The fundamental thrust of the PDA is to “grant legal protection for those staff members (in both public and private sectors) who might disclose information regarding unlawful or irregular behaviour by their employers or other employees of their employers”. Section 9(3)(d) of the PDA provides an exception clause to protected disclosure by an employee, related to a “breach of the duty of confidentiality of the employer towards any other person” combined with the “commercial confidentiality” (grounds for refusal of access) clause (Protected Disclosures Act 26 of 2000).

- Promotion of Administrative Justice Act 3 of 2000 (PAJA)

PAJA gives effect to Section 33 of the 'Bill of Rights' – that is, “the right to administrative action that is lawful, reasonable and procedurally fair. However, Section 1 of PAJA provides for exceptions to what is covered, as an administrative action, under its rubric. This exception “as a result allows for the exemption, from the provisions of PAJA, of administrative decisions to grant or refuse a request for access to information under PAIA” (Promotion of Administrative Justice Act 3 of 2000).

The legislation above confirms that the information that is contained in archives can and in most circumstances must be accessible. However, there are terms and conditions that have to be considered if one wants to access archival records. These terms and condition do not

violate the rights of anyone to access archival records but they ensure the security of the records and protect the material from abuse and misuse (McKinley, 2003: 9).

Preventative measures should be carried out to protect the archival materials while taking into consideration accessibility, operability and architecture which depends on the geographic location of the repository, but preservation is essential for all (Nsibirwa, 2012: 73). Ngulube (2007:45) also emphasises that “the aim of preservation is to prolong the usable life of archives in order to ensure indefinite access to them”.

The Archival Service at the Library of the National University of Ireland does perhaps encapsulate the role of the archive and the issue of access, as discussed above, when it states that

The role of the Archives Service is to preserve archival collections for future generations, as well as providing as much access as possible. To achieve this balance there are special conditions governing access to this material, which is unique and irreplaceable (Conditions of access: 2016?).

2.20 Summary

In this literature review chapter, the nature and role of archives was presented. The theories underpinning the preservation of records were discussed. Preservation of records and preservation policy were discussed in detail. The housekeeping issues associated with preservation were also described and discussed in detail. The issues of training, disaster management, security and building design were presented. The latter part of the chapter examined the issue of access to records including that of access by users with disabilities. The chapter ended with a review of legislation underpinning access to information in South Africa. The importance of there being a balance between preservation of records and access was stressed.

The next chapter will focus on the research methodology that was used in the study.

Chapter 3: Research Methodology

3.1 Introduction

Kumar (2005:16) points out that the way to find answers to your research questions makes up a research methodology. In light of Kumar's point, this chapter describes and discusses the research methodology used to "examine the preservation of, and access to, records at the KZN Archives". This chapter will cover research paradigms, the research approach adopted in the study, the research design, the population, data collection techniques and procedures, and data analysis. The important issues of validity and reliability in relation to the research instrument will also be discussed.

3.2 Research paradigms

There are many definitions of the term paradigm and different authors use it differently. However, Neuman (2003:541) defines a paradigm as a "general organising framework for social theory and empirical research". A paradigm defines the boundaries of how research is carried out, including:

- The kinds of questions asked
- What can be observed or investigated
- How data is collected
- How to interpret the findings (Neuman, 2003:541).

Babbie and Mouton (2006:48) link paradigms of social science with different methodological approaches. The quantitative approach is related to positivism and the qualitative approach is related to interpretivism. Normally social science studies take an interpretivist approach (Babbie and Mouton, 2006:49; Schutt, 2006:41). The research approaches are discussed below.

3.3 The research approach adopted

As mentioned above, research methodology revolves “around two major approaches, namely qualitative and quantitative” (Powell, 1999:3). A quantitative study measures “a phenomenon using numbers in conjunction with statistical procedures to process data and summarizes results” (Locke, Silverman and Spirduso, 1998:123). On the other hand, “qualitative research is conducted in a natural setting; it is concerned with viewing experiences from the perspective of those involved and attempts to understand why individuals react or behave as they do” (Glazier and Powell, 1992:6). The major attraction of the qualitative approach is that it is the oldest type of research that can describe, predict and explain a research phenomenon (Locke, Silverman and Spirduso, 1998:124). In addition, the qualitative paradigm has proved “a significant part of the foundation on which the social sciences have been erected” (Locke, Silverman and Spirduso, 1998:124).

Saunders, Lewis and Thornhill (2007:17) indicated that “qualitative and quantitative strategies are respectively characterised as inductive and deductive testing of theory. The inductive approach (qualitative) begins by gathering information from respondents and develops this information into themes”. On the contrary, “a deductive approach (quantitative) involves carrying out research with reference to ideas inferred from existing theories”. The aim of quantitative methods is to “determine whether the predictive generalisations of a theory are true” (Walliman 2011:13 and Silverman 2010:8). Conversely, “a study based upon qualitative research methods has the purpose of understanding a social or human problem from multiple perspectives” (Punch 1998:233). Moreover, “qualitative research is carried out in a natural setting and involves a process of building a complex and unified understanding of the subject matter under investigation” (Tashakkorri and Teddie 2009:219).

Creswell (2003) and Mahoney and Goertz (2006:233) explained that

a quantitative approach primarily yields statistical data using strategies of inquiry such as experiments and surveys. Quantitative research mainly involves the use of structured questionnaires in which the response options are pre-coded and a large number of respondents are involved.

Silverman (2010:13) noted “that a quantitative research approach obtains data which is statistically relevant and is usually used to answer questions such as how many, where from and how much amongst other questions”.

In contrast,

a qualitative research approach mainly gives answers to the question of why and involves collecting data by observing what people say and do. Unlike the quantitative research approach, qualitative methods yield non-numerical data that provide depth and detail through description of situations and observed behaviours in order to generate patterns, themes and ideas (Punch 1998:234).

However, Lund (2005:120) observed that “qualitative methods are subjective. Despite that weakness of subjectivity, many studies that have sought descriptive data have used qualitative methods because they are able to generate ideas and concepts with in-depth focus and knowledge of the researcher’s problem” (Tuli, 2006:101). The qualitative research approach is “therefore mainly used for brainstorming and testing new ideas”.

The assumptions, purposes, and methods of the two approaches also differ (Burns, 2000:39). The purpose of qualitative research “is to contextualize and interpret results using induction to derive explanations based on observed phenomena. On the other hand, the quantitative approach generalizes and predicts findings based on the use of formal instruments such as questionnaires” (Gorman and Clayton, 1997:28).

However, there are situations and topics in research that are “better served by a marriage of two traditions” (Bryman, 1988:173). The approaches can be used together to demonstrate concurrent validity (Cohen, Manion and Morrison, 2000:112). The use of two or more methods to study a phenomenon is called triangulation (Cohen, Manion and Morrison, 2000:112).

Hussein (2009:2) advised that “good research practice obligates the researcher to triangulate and identified four types of triangulation, namely; data triangulation, investigator triangulation, theory triangulation and methodological triangulation”. Data triangulation refers to

using several data sources for validation purposes; for instance, including more than one individual as a source of data. Investigator triangulation is described as the use of more than two researchers in any of the research stages in the same study. It involves the use of multiple observers, interviewers, or data analysts in the same study for confirmation purposes. Theoretical triangulation is defined as the use of multiple theories in the same study for the purpose of supporting or contesting findings since different theories help researchers to see the problem at hand using multiple lenses. Methodological triangulation means that a researcher uses a variety of methods to study a single problem, with different sources (Terreblanche, Durrheim and Painter, 2006:380).

Methodological triangulation was used in this study.

Methodological triangulation refers to “the use of multiple methods in the examination of a subject under study” (Jick 1979; Lund 2005 and Thurmond 2001). The basis for methodological triangulation is that the flaws of one method are neutralised by the strengths of another. Olsen (2004:18) and Hussein (2009) observed “that by combining methods, the research can achieve the best of each while overcoming their unique deficiencies”.

Jick (1979:606) communicated “that methodological triangulation is supposed to support a finding by showing that independent measures of it agree with it or at least do not contradict it”. Contrary to Jick (1979:606), Hussein (2009:9) explained that “it is not only possible for data to be inconsistent but to actually contradict. When several methods have been used, researchers sometimes obtain a data bank with opposing views”. However, “obtaining inconsistent and or contradicting results should not be perceived as a weakness or a drawback”. In fact, “not only convergent findings but also inconsistent and contradictory findings can help the researcher’s efforts to understand the subjects under study” (Marty, 2008:32). It is the “responsibility of the researcher to make sense of the evidence gathered regardless of what the outcome is. In other words, whether the data converge, is inconsistent, or contradictory, the researcher must attempt to construct explanations for the data and about the data” (Hussein, 2009:5). Methodological triangulation is therefore “a technique which provides more and better evidence from which researchers can construct meaningful propositions about the subject under the spotlight. As such, triangulation becomes a device for enhancing the credibility and persuasiveness of a research account”.

Many studies advocate methodological triangulation because it bridges issues of reliability and validity (Levine, 2000:25). Morse (1991:121) argued that “using both qualitative and quantitative methods could contribute to a better understanding of the concepts under study”. Nsibirwa (2007:49) states that “using a number of methods allows you to triangulate the research and this makes it more robust and valid”. The “utilization of different methods allows the researcher to overcome factors lacking, particularly when using a single method of research”. Babbie and Mouton (2001:275) also underscore the issues of validity and reliability stating that “triangulation is generally considered to be one of the best ways to enhance the validity and reliability of research done”. However, Creswell (1994:7) advised against using both methods in a single study because the whole exercise can be “expensive, time-consuming and lengthy”.

The current study adopted a methodological triangulation approach by collecting data using both quantitative and qualitative data collection methods. In an effort “to enhance the validity and reliability of the research findings, the current research deemed it necessary to employ both qualitative and quantitative research techniques”. Supporting that notion is Hussein (2009:8), Thurmond (2001), and Lund (2005) who emphasised that “triangulation is typically perceived to be a strategy for improving the validity and reliability of research”. The triangulation technique of “using both qualitative and quantitative methods of data collection was chosen because it permitted weaknesses inherent in qualitative methods to be neutralised by quantitative methods and vice versa” (Levine, 2000:25).

De Vaus (2001:3) is of the opinion that “researchers have to pay particular attention to research design as it determines the success of a research project”. The research design used is discussed below.

3.4 Research design

A research design is “a plan of how a researcher methodically collects and examines the data necessary to answer the research questions” (Babbie and Mouton, 2001:74). Coolican (2004:19) explained that “research design refers to the steps that researchers pursue to complete their study from the beginning to the end”. De Vaus (2001:9) noted that “a research design is more than a work plan in the sense that the work plan will flow from the project’s

research design”. De Vaus (2001:9) further explained that “the function of a research design is to ensure that evidence obtained enables the researcher to answer the research question”.

There are different types of research designs “that researchers may adopt as guides during their studies”. The choice of a research design by a researcher mainly depends on the nature of the research. Babbie and Mouton (2001:75) recommended that “attention has to be given to the research question and the research problem”. Durrheim (2006:37) emphasised that “when designing the study, a researcher must be guided by the purpose of the research, the theoretical framework informing the research, the context within which the research is to be carried out, and the research instruments engaged to collect and analyse the data”. Given this, the present study deemed it appropriate to employ the survey research design.

3.4.1 The survey research design

Glasgow (2005:4) indicated that “survey research is essentially known for producing less detailed data but can be applied over a broad area”. Owens (2002:9) explained that “surveys are concerned with collecting data directly from people about occurrences, incidences of events, and instances in varying circumstances and situations”. De Vaus (2001:10) noted that “surveys are descriptive in nature for they seek to make sense of the situation being studied from a descriptive point of view”.

A descriptive survey was used in this study. The survey facilitated the gathering of data about preservation of and access to records at the KZN Archives. Surveys “differ in terms of their scope: there are large-scale surveys such as a national census and smaller-scale surveys that look at a particular community” (Nsibirwa, 2007:51). The current study used a smaller-scale survey in that the “community” was the KZN Archives and its staff. The researcher was also influenced in his choice of the design given that related studies such as those of Ngulube (2007) and Nsibirwa (2007) “used the survey design to gather their data”.

3.5 Size and characteristics of the population

Babbie and Mouton (2003:173) state that the “population is the theoretically specified aggregation of study elements”. The population for the study comprised 19 staff members employed at the KZN Archives and included both professional and non-professional staff.

Professional staff were defined as those staff who had archival qualifications. They numbered nine in total, and comprised the Director, three Principal archivists, and five archivists. The non-professional staff numbered 10 and were categorized as “technical” staff. Given the small size of the population, sampling was unnecessary and all members of staff - both professional and non-professional - were requested to complete the questionnaire. The Director of the KZN Archives and the Principal archivist in Pietermaritzburg were selected to be interviewed based on their positions they were in, the knowledge they had of the KZN Archives, and the fact that they were accessible to the researcher (who was based in Pietermaritzburg).

3.6 Data collection techniques and procedures

According to Powell (1999:3), data collection instruments can be classified as either qualitative or quantitative in nature. As explained earlier under the section of the research approach, “qualitative techniques gather descriptive types of data while their quantitative counterparts collect statistical data” (Tuli 2006:99). The current study adopted both techniques and employed self-administered questionnaires, face to face interviews, and an observation guide as data collection instruments. Interviews were done to confirm and elaborate on the data obtained from questionnaires. They were also done to get data which the respondents who completed the questionnaire were not all in a position to provide. The construction of data collection instruments or tools has been considered a vital aspect of a research project. Kumar (2005:137) observed that “the findings, conclusions and recommendations that a study presents are based upon the nature of information collected”. Kumar (2005:237) added that “the nature of information gathered by researchers largely depends on the questions that they ask informants”.

The following section presents and discusses each instrument of data collection that was used in the study.

3.6.1 Self-administered questionnaire

A questionnaire is “a document comprised of questions that are specifically formulated to suit the objectives of the study, to get answers for the research question, and possibly to solve the

research problem” (Tashakkori and Teddie 2009: 234). The strength of “questionnaires is that they are easy to analyse” (Blaxter, Hughes and Tight 2006:179). Punch (1998:134) confirmed that “questionnaires have the added advantage that they can be completed personally by the informant without the help of the researcher”. Compared to other instruments, the questionnaire is “considered inexpensive and it permits a large number of respondents to be surveyed in a short period of time even if the respondents are widely distributed geographically” (Milne, 1999:2). Furthermore, they also “provide a high degree of anonymity for respondents” (Nachmias 1996:226).

Disadvantages of using questionnaires include the fact that some of the “people who receive questionnaires do not return them and that when returned, some may be incomplete” (William, 2011:58). Linking in with this first disadvantage is that “questionnaires usually have a low response rate compared to interviews”. Kumar (2005:130) indicated that “the major drawback of questionnaires is that their application is limited to a literate study population. They may not be used on a population that cannot read or write, the very young, very old or handicapped”. However, the population in the present study was sufficiently “literate and was able to answer a self-administered questionnaire” (Babbie and Mouton 2001:258). A further disadvantage of the questionnaire “is that in cases where respondents do not understand some questions, there is no opportunity for them to have the questions clarified” (William, 2011:58).

In the current study, a self-administered questionnaire was used to collect data from all 19 archival staff. The questionnaire was ten pages long and consisted of 30 questions. Even though the researcher intended to keep the questionnaire as short as possible, this was not possible due to the number of issues related to the preservation of and access to materials. The questionnaire was adapted from those used in two studies: Nsibirwa’s “Preservation of and access to legal deposit material in South Africa” (Nsibirwa, 2012), and Ngulube’s “Preservation and access to public records and archives of South Africa” (Ngulube, 2007). (Note: The current study differs from these studies in that it focused on preservation and access at the provincial level and specifically the KwaZulu-Natal Archives whereas the study of Nsibirwa, as its title suggests, focused on legal deposit material and that of Ngulube on preservation and access at the national level.) Schutt (1996:278), in this regard, states that “If another researcher previously has designed a set of questions to measure a key concept in your study and evidence from the previous survey indicates that these questions provide a

good measure of the concept, and then by all means use that instrument”. The questionnaire was used to obtain both quantitative and qualitative data about the preservation of and access to records at the KZN Archives. This was done by using both open and closed questions.

Open questions let the respondents write “their knowledge or views in their own words and closed questions require the respondent to select one or more choices from a fixed list of answers provided” (Terreblanche, Durrheim and Painter, 2006:486). The open questions thus collect qualitative data while closed questions collect quantitative data. The questionnaire used in the study was comprised mainly of closed questions. According to the UKZN School of Education (2004:81), “a very structured questionnaire which has closed questions collects numerical data which can be analysed using statistical methods”. The respondents were asked open questions to allow them to express themselves on the subject of specific issues without being pressed.

Neuman (2006:287) argues that the different types of questions have disadvantages as well but “a researcher's choice to use an open or closed-ended question depends on the purpose and the practical limitations of a research project”. The major disadvantage of closed questions

is that a researcher must already have a clear understanding of the topic of his/her questions and how they tie into the overall research problem before they are created. Without this, closed questions will lead to insufficient options for respondents to select from, questions that do not properly reflect the research’s purpose, and limited or erroneous information (Terreblanche, Durrheim and Painter, 2006:486).

There are however,

drawbacks to open questions as well. Though respondent answers are almost always richer in quality, the amount of effort it takes to digest the information provided can sometimes be overwhelming. That is why open questions work best in studies with smaller populations (Terreblanche, Durrheim and Painter, 2006:486).

The copy of the questionnaire used in the study can be found in Appendix 3.

3.6.2 Interviews

Amongst the several research instruments, “interviews are regarded as one of the most widely used and powerful methods in which researchers try to understand their respondents” (Hartman, 2011). Interviews, according to Hartman (2011) are “suitable when the study is aimed at obtaining individual views, beliefs and feelings about a subject. Interviews proved to be a useful data collection technique, for they permitted the researcher to establish rapport with interviewees. As a result, a relaxed and comfortable environment was created permitting respondents to give answers honestly and according to their knowledge”. Creswell (2009) advised that “it is the responsibility of the interviewer to make the interviewee feel comfortable and relaxed.” In the current study, the researcher was careful not to ask suggestive questions and remained non-judgmental to the responses provided by the interviewee.

A semi-structured interview was used in the current study and it contained 28 questions. While some of the questions were closed, respondents were asked more open questions than appeared in the questionnaire. The semi-structured interviews allowed the researcher to gather data that could not be answered by the archival staff (but only the Director). Questions about the budget and also in-depth information about issues that needed more clarity were only able to be answered by the Director of the KZN Archives, and, to a lesser extent, the Principal archivist. The interview schedule can be found in Appendix 2.

3.6.3 Observation

Observation is a systematic data collection approach. The researcher uses all their senses to examine the condition in the field. There are different types of observation, and they include scientific observation, general observation, participant and non-participant observation, controlled and un-controlled observation, structured and unstructured observation (Terreblanche, Durrheim and Painter, 2006:488). The current study adopted a structured observation approach. A structured observation is “a planned observation of a phenomena and has to follow certain patterns, rules and designs for the purpose of what, how and when to observe” (Terreblanche, Durrheim and Painter, 2006:488). Structured observation works

according to a plan and involves specific information of the units that are to be observed and also about the information that is to be recorded. The operations that are to be observed and the various features that are to be noted or recorded are decided well in advance. Such observations involve the use of special instruments for the purpose of data collection, and these are also structured in nature (Terreblanche, Durrheim and Painter, 2006:488).

The “major advantage of observation is that it is another way of finding out what is happening” (Nsibirwa, 2007:55). The UKZN School of Education, Training and Development (2004:95) states that “this method means that the researcher does not have to rely on the opinions or perceptions of others”.

An observation check list adapted from Nsibirwa (2007) was used to focus the observations and simplify the methodical recordings of the observations. Observation which the researcher made of the stack rooms included:

- The physical appearance of the stack room;
- The arrangement of the records; and
- The room temperature, lighting and cleanliness.

The observation checklist (guide) can be found in Appendix 4.

3.6.4 Graphic data

Graphic data refers to graphic visual representation of information, data or knowledge intended to present information quickly and clearly. The main goal of data visualization is to communicate information clearly and effectively through graphical means (Babbie and Mouton 2001:244). The current study adopted graphic data as a collection tool and the graphic data was obtained by means of a digital camera.

The graphic data can be found in Chapter 4.

3.7 Validity and reliability of instruments

Validity and reliability are very “important issues in social research” (Neuman, 2006:188). Validity can be defined as “the degree to which the research findings are sound” (Terreblanche, Durrheim and Painter, 2006:90). Neuman (2006:188) states that “reliability means dependability or consistency”. This means that if the instruments are reliable, similar results should be collected when administered to a similar group of people in the same context. Neuman (2006:188) emphasizes that “perfect reliability and validity are virtually impossible to achieve”. Nsibirwa (2007:56) states that “Validity and reliability are continuous concepts.”

The “credibility of a research project largely depends on the accuracy of the data collection procedures. That means that the instruments employed to gather information must obtain the type of data needed to provide answers to the research questions” (Tashakkori and Teddie 2009:209). Whether a study “employed quantitative, qualitative or mixed approaches, reliability and validity have been confirmed to be the major technical considerations” (Babbie and Mouton 2001:119). Reliability and validity play “a significant role in establishing the credibility and truthfulness of findings” (Walliman 2011:62). A study can only be considered valid if the conclusions are credible and accurate. However, Punch (1998) expressed that “reliability is a required but inadequate condition for validity in research”.

In the current study the questionnaire was pretested as a method for content validation. In addition, the researcher also ensured that content validity was achieved by confirming that questions formulated addressed the set questions. In terms of the interview schedule and the validity of the responses obtained to the questions posed it was assumed that the answers provided by both respondents were trustworthy and there was nothing to suggest that honest answers were not received.

To help ensure validity both instruments were pre-tested and this is discussed below.

3.7.1 Pre-testing the instruments

Pre-testing is the administration of the survey instruments to similar respondents to help identify weaknesses with the tools before the actual data collection takes place, as well as solicit the opinions of other researchers before finalising the instruments (Schutt, 2006:250). Ngulube (2005) observed that “data collection instruments may never be immune from errors despite the level of carefulness that a research study may employ”. Amongst the best ways a researcher can “eliminate the errors is through pre-testing the instruments” (Babbie and Mouton 2001:244). The current study “pre-tested the questionnaire and interview to expose any flaws in the instruments” (Babbie and Mouton 2001:244). Powell and Connaway (2004:10) said that “pre-testing gives researchers the chance to note vague questions, poor instructions, and irrelevant questions”.

Designing a perfect survey questionnaire is impossible. Yet, the aim in research is to provide results that are valid, reliable, sensitive, unbiased and complete (Collins, 2003:229). This is done by identifying unclear and unambiguous questions, and by re-wording these questions to make them clear. However, it is impossible to achieve success without a well-designed questionnaire.

According to Neuman (2006:277), “a good questionnaire forms an integrated whole”. This means that a good questionnaire gives a researcher a good combination of data (Nueman, 2006:277). It is essential for the questionnaire and interview schedule to be clear, relevant and meaningful to the respondent. To identify possible problems with the research instruments, the researcher sent the research instruments to the University of KwaZulu-Natal Archives and the Alan Paton Centre for pretesting. The research instruments were pre-tested on the staff members (two from the Archives and two from the Centre) who evaluated whether or not the questions and instructions were appropriate and easily understandable. As a consequence of the pre-tests, various changes were made to both the instruments and these are outlined below:

3.7.1.1 Changes made to the questionnaire

- Spelling errors were corrected.
- All the closed questions' possible answers were reformatted and the selection of answers was put in tables to make the questionnaire look neater and more appealing.
- The number of questions was reduced from 62 to 30.

3.7.1.2 Changes made to the interview schedule

- As with the questionnaire, the closed questions' possible answers were reformatted and the selection of answers was put in tables. These changes were made to make it easier for the researcher to ask the questions and record the answers during the interview.
- As with the questionnaire, the number of questions was reduced, in this instance, from 45 to 28.

3.8 Administering the instruments

Subsequent to having the questionnaire pre-tested and altered, it was delivered by hand on 4 May 2015 to the respondents at the Pietermaritzburg Archives. Within the next two weeks, copies of the questionnaire were delivered to the other two centres, namely, Ulundi and Durban, and these were distributed to the staff members at these centres. A covering letter was attached to the questionnaire to explain briefly the rationale of the study and request respondents to complete the questionnaire. The questionnaire took approximately 20 minutes to complete.

Appointments were made a week before the interviews. The Director of the Archives and the Principal archivist in Pietermaritzburg were interviewed (face-to-face) on 11 May 2015 to obtain their opinion on the preservation of, and access to the archival materials. During the interviews, the respondents were given a copy of the interview schedules, because there were many questions which contained lists and a number of options that had to be chosen. The

interviews lasted for approximately 30 minutes each. The researcher used his smart phone to record the interviews. This took place with the consent of the interviewees.

The observations of the stack rooms in the Pietermaritzburg centre were carried out on 4, 11 and 18 May 2015. These dates were arranged by the researcher through the help of the Director of the Archives. The researcher collected graphic data by taking photographs of the various sections (stack rooms) of the Pietermaritzburg Archives, with the permission of the head (Principal archivist) of the repository section.

3.9 Data Analysis

In this study, as outlined earlier in the chapter, both quantitative and qualitative techniques were employed. According to Nueman (2012:455), quantitative analysis proceeds by using statistics, tables, graphs, and charts, and discussing what they show related to a hypothesis. In the current study, statistical analysis using the Statistical Package for the Social Sciences (SPSS) was used to organise and analyse the quantitative data collected from the self-administered questionnaire and observation schedule. Organising data included analysing the raw data, and checking for missing data, ambiguity and errors. However, the open questions in the questionnaire and the interview were analysed using content analysis. According to Neuman (2006:44) “content analysis is a technique for examining the content, or information and symbols, contained in written documents or other communication medium”. There are “two types of content analysis, namely, relational analysis and conceptual analysis” (Colorado State University, 2007). Conceptual analysis was used for this study. In conceptual analysis, “a concept is chosen for examination and the analysis involves tallying its presence” (Colorado State University, 2007). Such analysis was used to organise, describe and analyse data collected from the observations recorded, and the open questions in both the questionnaire and the interview schedule. Responses to the interview questions were analysed manually and, as evident in the following Chapter, the findings were reported in the form of text.

3.10 Summary

The research methodology was described in this chapter. The research approaches, research paradigms, research design, population, and data collection techniques were covered. The study used both qualitative and quantitative methods, namely a self-administered questionnaire, an observation guide, an interview schedule and a camera to collect data. Statistical analysis using SPSS was used to put in order and analyse quantitative data collected from the self-administered questionnaires. Content analysis was used to analyse qualitative data obtained from the open questions in the questionnaire and the responses to the questions posed in the interview schedule. The research results will follow in the next chapter.

Chapter 4: Research results

4.1 Introduction

This chapter presents the data collected from the study, which was conducted by means of a self-administered questionnaire (distributed to 19 personnel), interviews (with the Director of the Archives and the Principal Archivist), and observation (of various aspects of the Pietermaritzburg Archive relevant to the study). The chapter provides summaries of responses received as well as the respondents' demographic profiles, including age, gender and educational level. As mentioned above, the study used three methods to collect data and the results pertaining to each method are presented separately. First are the results from the questionnaires, then those from the interviews and, finally, the results emerging from the observation. It needs to be pointed out that while the results are given according to the questionnaire, the instrument was formulated to respond to the research questions listed in Chapter 1.

4.2 The response rate

Out of the 19 questionnaires distributed 15 were returned, yielding a response rate of 78.9%. A response rate of 50% "is considered sufficient for analysis and reporting, 60% good and 70% very good" (Babbie and Mouton, 2001:261). Schutt (1996:289) states that even a response of 70% is insufficient but it can be acceptable. The response rate in the present study was high because the researcher was known by the population and some were doing part-time study at UKZN as well. Questionnaires were hand delivered to all three repositories of the KwaZulu-Natal Archives. In Durban and Ulundi they were hand delivered and collected by the Director of the Archives who is based in the head office in Pietermaritzburg. This may be a further reason for the high response rate. As Babbie and Mouton (2001:259) point out "generally, questionnaires that are delivered or collected or both seem to have higher completion rates than straightforward mail surveys". Results from the questionnaire are shown below.

4.3 Results pertaining to the questionnaire

The research results “obtained from the questionnaire are reported according to the main sections of the instrument, namely demographic data, Archive policies, environmental conditions of the stack room, storage and handling, disaster preparedness and management, and access to information”. The findings are described as well as presented in either table form or graphically. All percentages are rounded off to one decimal place. As noted, the KZN Archives is divided into three branches, namely, Pietermaritzburg, Durban and Ulundi. The research results pertaining to the questionnaire and interview are combined for all branches. The observation was only done at the Pietermaritzburg Archive specifically.

4.3.1 Demographic data

The demographic data as presented below provides background information on the respondents. Information elicited concerned the respondents’ gender, age, and highest level of education reached. Table 4.1 below shows the count distribution of the gender of respondents.

Table 4.1 Gender of respondents

N =15

Gender	Count	Percentage %
Female	8	53.3
Male	7	46.7
Total	15	100

There were more female respondents (eight or 53.3%) than male respondents (seven or 46.7%). Regarding their age group, seven (46.6%), were within the age bracket of 31-40 years, followed by five (33.3%) who were between 20-30 years of age. Three (20%) were in the bracket of 41-50 years old. Table 4.2 below shows these statistics.

Table 4.2 Age of respondents

N =15

Age	Count	Percentage %
20-30	5	33.3
31-40	7	46.7
41-50	3	20
Total	15	100

The level of education attained by respondents is shown in Figure 4.1 below. All 15 respondents (100%) had a tertiary qualification.

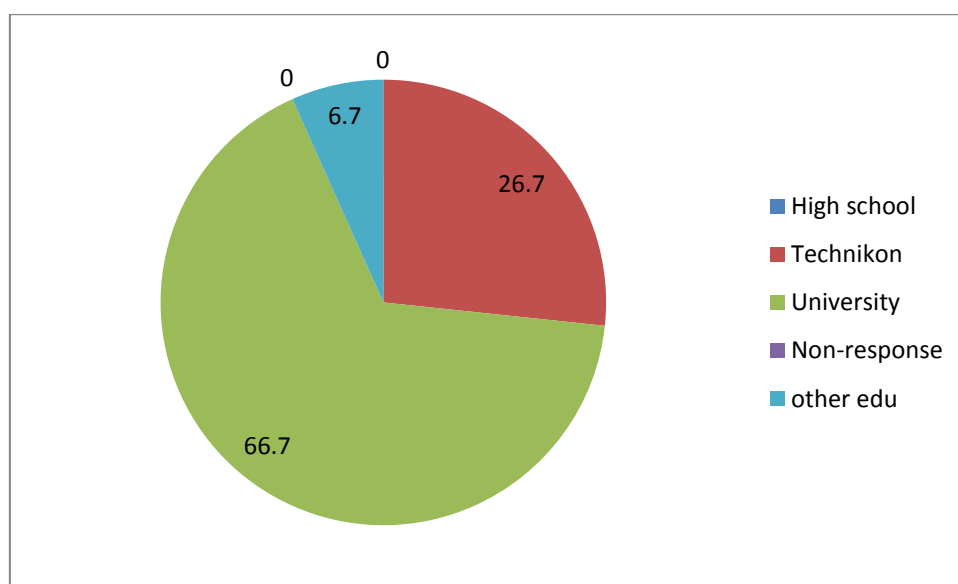


Figure 4.1 Education of respondents

N =15

Table 4.3 below depicts the educational level of respondents in terms of their age. Four respondents who were between 20-30 years old had university qualifications and one respondent from this age group had a technikon qualification. Four respondents who were aged within the bracket of 31-40 had university qualifications and two respondents from this age group had technikon qualifications. One respondent from the same age group had a

college qualification. Two respondents aged between 41-50 had university qualifications and one respondent from this age group had a technikon qualification.

Table 4.3 Cross Tabulation of Age of Respondents and Education of Respondents

Age of respondents	Education of respondents			Other education of respondents	Row total	Percentage %
	High school (matric)	Technikon	University	College		
20-30	0	1	4	0	5	33.3
31-40	0	2	4	1	7	46.7
41-50	0	1	2	0	3	20
Column total	0	4	10	1	15	100
Percentages%	0	26.7	66.7	6.7	100	

4.3.2 Preservation policy at the KwaZulu-Natal Archives

Questions asked in this section were to establish whether or not the KZN Archives had policies relating to preservation on the one hand and the training and recruitment of personnel on the other. Eight (53.3%) respondents stated that there was a policy to improve preservation conditions, yet seven (46.7%) stated that they were unsure of there being such a policy. Eight (53.3%) respondents stated that they were not sure that there was a policy to train and recruit qualified personnel while seven (46.7%) stated that there was such a policy. These results are shown in Table 4.4 below.

Table 4.4 Archive policies

N =15

Response	To improve preservation conditions		To train and recruit staff	
	Count	Percentage%	Count	Percentage %
No	0	0	0	0
Yes	8	53.3	7	46.7
Unsure	7	46.7	8	53.3
Total	15	100	15	100

4.3.3 The environmental conditions of stack rooms

This section presents results concerning the environmental conditions of the stack rooms including the issues of temperature, relative humidity, light, and pest management. The purpose of this set of questions was to find out under what conditions and how paper-based materials were stored and preserved. Questions 5 to 9 were about climate control, particularly in relation to the temperature of the stack rooms and relative humidity. Question 5 asked whether the Archives has a heating, ventilation and air conditioning (HVAC) system in the stack rooms. All 19 (100%) respondents stated the Archives has a HVAC system. Question 6 asked whether the HVAC system provides constant climate control throughout the year. All 19 (100%) respondents said no. Question 7 asked how often the HVAC system is serviced and all 19 (100%) respondents stated that it was serviced once a year.

Question 8 enquired whether or not the temperature in the stack rooms was monitored constantly. Twelve (80%) respondents confirmed that the temperature was monitored constantly. The remaining three (20%) respondents were not sure whether the temperature

was constantly monitored or not. Question 9 enquired whether or not the relative humidity was constantly monitored in the stack rooms. Nine (60%) respondents confirmed that the relative humidity was constantly monitored while the remaining six (40%) were not sure. Questions were asked concerning lighting and pest management. The results are presented below.

4.3.4 Lights

Respondents were asked in question 10 how many hours materials were exposed to light during the day. This question was an open one. Eight (53.3%) respondents were unsure about the number of hours. Two (13.3%) respondents stated that materials were exposed to light for eight hours during the day. Lastly, one (6.7%) respondent specified that the materials were exposed to light for an hour and twenty minutes during the day. These results are presented in Table 4.5 below.

Table 4.5 Number of hours records exposed to light

N =15

Number of hours	Count	Percentage %
Unsure	8	53.3
Eight hours	2	13.3
One hour twenty minutes	1	6.7
Non-response	4	26.7
Total	15	100

Question 11 asked whether the stack room lights were turned off when not in use. Twelve (80%) of the respondents stated that the lights were indeed turned off when not in use. One (6.7%) respondent stated that they were not turned off. Two (13.3%) of the respondents were unsure.

4.3.5 Pest management

Question 12 enquired whether all materials accessioned were checked for insects/vermin before they were placed in the stack rooms. Seven (46.7%) of the respondents stated that the materials were checked for pests, six (40%) of the respondents stated that they were not checked and two (13.3%) of the respondents were unsure. The results are summarized in Figure 4.2 below.

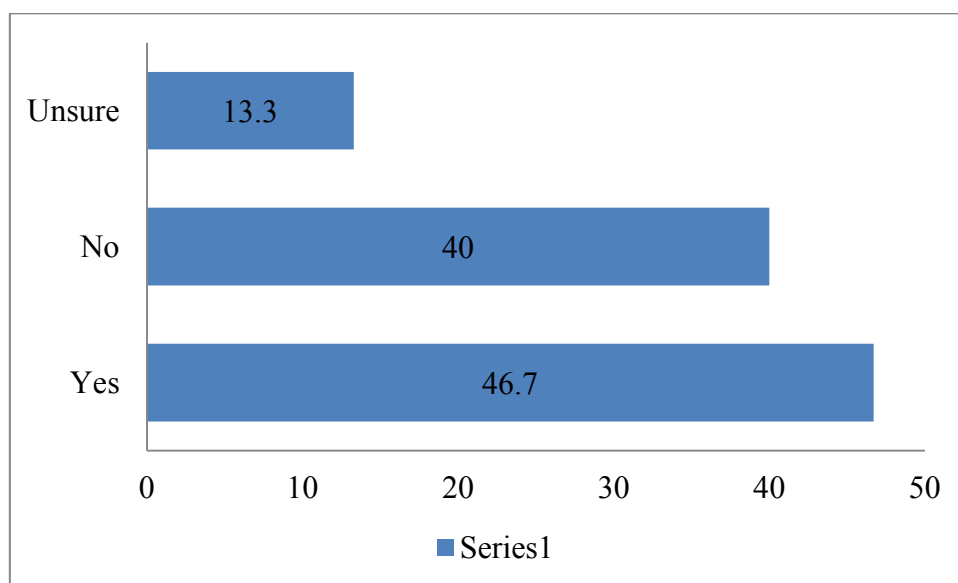


Figure 4.2 Checking accessioned materials for pests

N =15

Question 13 asked about insect invasion and vermin infestation in the building. Seven (46.7%) of the respondents stated that they have never experienced insect invasion and vermin infestation in the building. Five (33.3%) indicated that they had experienced such invasions and infestations. The remaining three (20%) respondents were unsure.

4.3.6 Storage and handling

In this section respondents were asked “about the cleanliness of the stack rooms, guidelines for the handling of the materials and the storage space to accommodate archival materials”.

In question 14 the respondents were asked how the stack rooms were cleaned. A majority, eight (53.3%) of the respondents, said they were unsure how stack rooms were cleaned. Three (20%) of the respondents did not answer the question. Two (13.3%) of the respondents stated that a feather duster was used when cleaning the stack room. One (6.7%) of the respondents stated that stack rooms were mopped. Lastly, one (6.7%) respondent said that floors and shelves were cleaned on a daily basis by the cleaning staff.

Question 15 enquired whether there is adequate space for shelving and storage (of materials). As depicted in Figure 4.3 below, the majority of respondents, 53.3% (eight), stated that there was adequate space for shelving and storage. Five (33.3%) of the respondents said the space was inadequate and two (13.3%) did not answer the question.

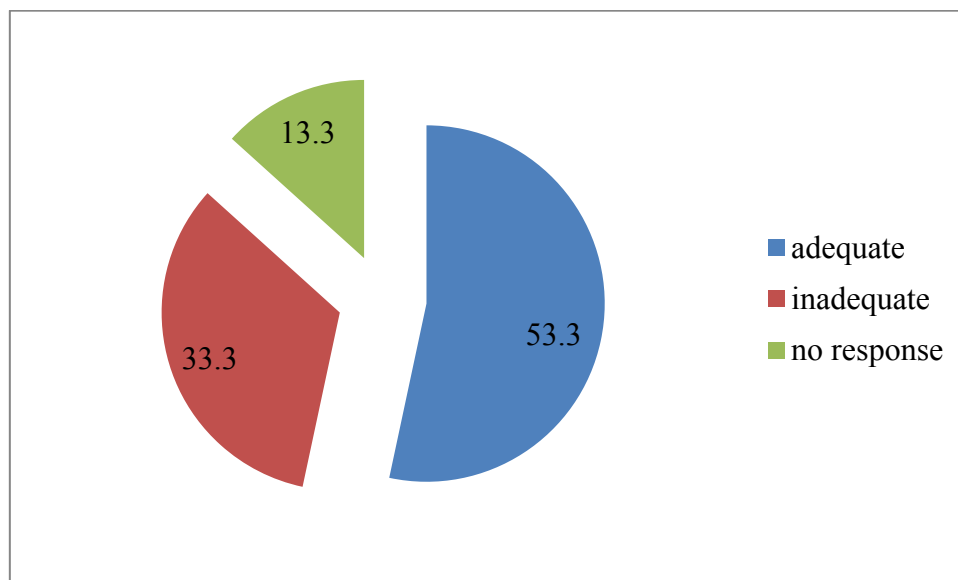


Figure 4.3 Space for shelving and storage

N =15

Table 4.6 Guidelines for handling of materials

N =15

Response	Staff guidelines		User guidelines	
	Count	Percentage %	Count	Percentage %
Yes	9	60	6	40
No	3	20	6	40
Unsure	3	20	3	20
Total	15	100	15	100

In questions 16 and 17, respondents were asked to indicate whether users and staff have guidelines for the handling of archival materials. As reflected in Table 4.6 above, nine (60%) respondents indicated that there were guidelines for staff, and six (40%) respondents indicated that there were guidelines for the users. Three (20%) respondents stated that there were no guidelines for the staff while six (40%) respondents stated that there were no guidelines for the users. Three (20%) respondents were unsure whether there were guidelines for the staff and three (20%) were unsure whether there were guidelines for the users.

4.3.7 Disaster preparedness and management

A series of questions were asked regarding whether the Archives was sufficiently prepared with regard to disasters. The first question (question 18) asked whether there was a disaster planning team in place. As can be seen in Table 4.7 below, six (40%) respondents stated that the Archives has a disaster planning team, five (33.3%) stated otherwise. Two (13.3%) of the respondents were unsure and two (13.3%) of the respondents did not answer the question.

Table 4.7 Disaster planning team

N =15

Response	Disaster planning team	
	Count	Percentage %
Yes	6	40
No	5	33.3
Unsure	2	13.3
Non- response	2	13.3
Total	15	100

It was asked in question 19 whether the Archives have a fire detection system in the stack rooms. Figure 4.4 below shows that the majority, nine (60%) respondents, indicated that the Archives has a fire detection system in the stack room.

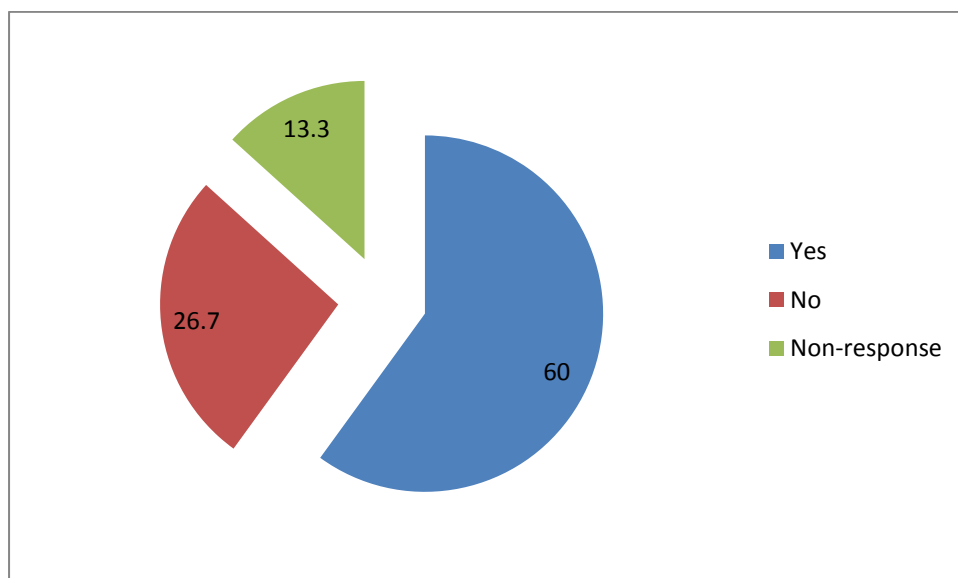


Figure 4.4 The presence of a fire detection system in the stack room

N =15

Question 20 concerned the security systems in the Archives. Respondents were allowed to select more than one answer for the question. Hence the numbers of responses do not add up to 15 and the total percentage exceeds 100% (and the totals are thus not given). The security systems indicated by the respondents are shown in Table 4.8 below. Nine respondents (60%) indicated that the Archives has security personnel, six respondents (40%) indicated there was an electronic security system, nine respondents (60%) indicated that there are closed circuit television cameras (CCTV) and three respondents (20%) indicated that there is an intruder alarm system.

Table 4.8 Security systems

N =15

Security systems	Response	
	Yes	Percentage %
Employ security personnel	9	60
Electronic security system	6	40
Closed circuit television cameras (CCTV)	9	60
Intruder alarm system	3	20

Question 21 enquired how effective the security system has been since it was installed. All respondents (100%) said the system was very effective.

Question 22 asked whether or not respondents observed deterioration to be a result of document use. Table 4.9 below shows that the majority 10 (66.7%) of respondents answered “no” and five respondents (33.3%) said “yes”.

Table 4.9 Deterioration from use

N =15

Response	Count	Percentage %
Yes	5	33.3
No	10	66.7
Total	15	100

4.3.8 Access to records

This final section of the questionnaire consisted of questions about copyright legislation and access conditions.

Question 23 solicited whether all records in the Archives were presently open to use. Seven (46.7%) of the respondents indicated that all records were open to use. Four (26.7%) respondents said that not all records were open to use. Two (13.3%) respondents were unsure and two (13.3%) respondents did not answer the question.

Question 24 asked respondents who had replied that not all records were open to use to explain their answer. Three of the four respondents replied and the explanations are as follows: A respondent in the Pietermaritzburg Archive stated that there were documents such as estates that were very old (100 years) and thus have been withdrawn from consultation. A respondent in the Durban Archive said that damaged records were closed to the public. Finally, the third respondent, based at the Ulundi Archive stated that records required permission from the source or donator before being made available for use.

Question 25 asked whether users are being made aware of their access rights and their responsibility to comply with the policies and regulations of the Archive. The majority, 10 (66.7%) respondents, said users were not being made aware. Three (20%) respondents did not answer the question. Two (13.3%) respondents stated that they were unsure about the question. Given that Question 26 was premised on one or more respondents answering yes to Question 25, there were understandably no responses to this question.

Table 4.10 below illustrates respondents' views with regard to users being made aware of their obligations to comply with copyright legislation and access conditions (Question 27). Eight (53.3%) of the respondents said users were not made aware of these obligations. Three (20%) respondents said users were being made aware. Two (13.3%) respondents were unsure and two (13.3%) did not answer the question.

Table 4.10 Users being made aware of copyright legislation and access conditions

N =15

Response	Count	Percentage %
Yes	3	20
No	8	53.3
Unsure	2	13.3
Non- response	2	13.3
Total	15	100

The three respondents who replied in the affirmative to question 28 were asked to describe how users were being made aware of copyright legislation and access conditions. A Pietermaritzburg Archive respondent said that the "Archivist on duty explains things to researchers and ensures that the researcher understands copyright policies and he/she has to abide with them". A respondent at the Durban Archive stated that "There is a form that

academics fill to say they will give the copy of their research once it complete”. Finally, a respondent at the Ulundi Archive said “When scholars make copies they are told about copyright legislation”.

Respondents were asked in Question 29 to what extent the KwaZulu-Natal Archives was accessible to physically disabled people. Two (13.3%) respondents did not answer the question. Of the 13 (86.7%) respondents who did answer, 10 (66.7%) said the building was accessible to physically disabled people. Their responses included the following:

- The building is user friendly.
- The building has a lift. Reading room is accessible by wheelchair and toilets are also accessible.
- There are ramps available and the parking space is available for people living with disability.
- There is a lift for both able and disabled.

However, three (20%) of the respondents said access is limited to people with physical disabilities. Their responses were the following:

- Access is there but it is limited; for instance entry to reading room.
- The building is not user friendly because the archive in Durban has no lift therefore it is not accessible to people who use wheelchairs.

Respondents were asked in question 30 how the KwaZulu-Natal Archives ensures that records are accessible fairly and equally by the public. Twelve (80%) respondents answered this question. Ten (66.7%) of the respondents believed that records were accessible fairly and equally by the public. Their responses are provided below and are grouped according to the branch at which they were employed. More than one answer was given by some of the respondents and similar answers were given at times (and these are repeated below):

Pietermaritzburg Archive:

- Fair and equal access to records is ensured by means of outreach programmes and by means of creating interest groups.
- All users receive professional assistance through the archivist.
- If archivist cannot help the user they direct the person to the right and appropriate institution.

- They ensure that they operate according to the rules of the National Archives Act and Promotion of Access to Information Act.
- The archivists know that they are information professionals and they cannot deny information to any person.
- Users get the attention they deserve.
- There is no discrimination in accessing the archive.

Durban Archive:

- Users access records in the reading rooms free of charge.
- Users are treated with respect, each user is unique.
- Users get the attention they deserve.
- There is no discrimination in accessing the archive.

Ulundi Archive:

- Every member of the public is allowed to access files and they are not limited.
- Users get the attention they deserve.
- There is no discrimination in accessing the archive.

Two (13.3%) of the respondents believed that records were not accessible fairly and equally by the public at the KwaZulu-Natal Archives. Their responses were the following: A respondent from the Ulundi Archives stated that many people were not aware of the Archives, and that they were not well marketed. A respondent from the Durban Archives was of the opinion that, “It is still a dream to say archives can be accessed fairly and equally by the public”.

While the majority of respondents as reflected above believed that records were accessible fairly and equally by the public, some of these respondents made further comments suggesting the opposite. One Pietermaritzburg respondent pointed to the Archive building not being easily found by the users. There were respondents from all three branches who also noted that potential users either did not know about the archives or were misinformed about them.

The results from the interviews conducted are reported below.

4.4 Results from interviews

The interviewees were the Director of the KwaZulu-Natal Archives (who is based at the Pietermaritzburg Archive) and the Principal Archivist of the Pietermaritzburg Archive. The Director of the Archives and the Principal Archivist who were interviewed were both university graduates. One interviewee had a Masters in Library and Information Science and the other had a Post-graduate Diploma in Records and Archival Management.

Question 4 enquired whether the KZN Archives as a whole has a mission statement. Both interviewees stated that the Archives has a mission statement. Question 5 asked the interviewees to state what the mission statement was and it reads as follows: “Build our future by cherishing our past”.

Question 6 enquired whether the Archives has a policy to improve preservation conditions, develop conservation facilities and train qualified personnel. Both interviewees stated that the Archives does not have policies addressing these issues. The Director of the Archives however, said that they were currently working on a preservation policy. The Principal Archivist said it was still their goal to create a successful preservation policy. Other questions were skipped because they were about the effectiveness of the preservation policy.

Question 11 asked about the current annual budget for the Archives. The Director of the Archives stated that the current annual budget was R6 million. Question 12 asked “what is the percentage of the annual budget that was allocated to the archives specifically for preservation purposes”. Both interviewees were unsure about the percentage. Question 13 enquired whether the allocation of the annual budget was sufficient. Both interviewees were in agreement stating that the annual budget allocated to the Archives was insufficient. Question 14 asked the interviewees to be more specific regarding the insufficiency of the budget. The Director stated that they needed a bigger budget to purchase preservation equipment and to set up a preservation studio and renovate other repositories (Durban and Ulundi) because they are not in a good condition. The other interviewee (Principal Archivist in PMB) did not provide a more specific answer.

Question 15 asked whether the Archive has a written disaster preparedness and recovery plan. Both interviewees stated that the KwaZulu-Natal Archives does not have such a plan. Once again, other questions were skipped because they were premised on the Archives having a disaster preparedness and recovery plan.

Question 21 asked whether the personnel carrying out preservation activities were trained in preservation techniques. Both interviewees stated that the staff knew very basic preservation techniques. Question 22 enquired whether the users' interest and needs were analysed at regular intervals and policies and practices were adjusted accordingly. Both interviewees answered in the negative. Question 24 concerned whether there was sufficient physical and technical equipment to facilitate easy and safe access to the archival material. Again both interviewees replied in the negative. The Director of the Archives stated that scanners and computers were needed to digitize their records.

Question 25 enquired whether access facilities were adequate for physically challenged (disabled) people. Both interviewees stated that the KZN Archives had adequate access facilities for physically challenged users.

According to the Director of the Archives, when answering question 26 which concerned the priorities regarding access to the collection for users, the main priority was the need to scan the Department of Home Affairs records as these were heavily accessed by users.

Question 27 enquired about the extent to which the KZN Archives is accessible to the majority of the population in the province. Both interviewees stated that the Archives is not accessible to the majority of the population in KwaZulu-Natal. The Director pointed to the need for digitization of the records which would assist in terms of improving accessibility and that this process was being planned for.

Question 28 asked how the KZN Archives ensure that records are accessible fairly and equally by the public. The Director stated that records were accessible to every citizen regardless of race or class. The Principal Archivist pointed out that they treat all users with respect and they make sure that all users get the information they want. Both interviewees stated that there is a photocopying and reading room service in all three branches to ensure that records are accessible fairly and equally by the public.

4.5 Results from the observation schedule

As noted in Chapter 3, a third data collection method was a structured observation schedule. The observation was done at the Pietermaritzburg Archives. The observations of the stack rooms in the Pietermaritzburg centre were carried out on 4, 11 and 18 May 2015. These dates were arranged by the researcher through the help of the Director of the Archives. The researcher collected graphic data by taking photographs of the various sections (stack rooms) of the Pietermaritzburg Archives, with the permission of the Principal Archivist who was head of the repository section.

The results of the observation are reported according to the main sections of the observation guide namely, accessibility, physical appearance of the stack rooms, security of records, finding aids and the storage of records. Graphic data in the form of pictures taken with the camera are also presented to provide graphical “evidence” of the above.

4.5.1 Accessibility

The researcher observed that the Pietermaritzburg Archives is accessible to people who use a wheelchair and the entrance door has a sensor. It is thus easy for a person in a wheelchair to enter because the door automatically opens when the person comes towards the door. However, the researcher also observed that it is not easy for people in wheelchairs to sign the register as the table is too high. The picture of the Pietermaritzburg Archives is shown below in Figure 4.6.



Figure 4.5 Pietermaritzburg Archives

4.5.2 Physical appearance of the stack rooms

All stack rooms in the Archives have a heating, ventilation and air conditioning (HVAC) system. The HVAC system is always on. The stack rooms are cold and kept at a constant temperature of 22.8 Degrees Celsius. A thermo hygrometer is used to measure humidity and the humidity is kept at a constant 54%. This is shown in Figure 4.7 below. In terms of lighting, fluorescent lights are used and not bulbs. The lights in the stack rooms are turned off when the rooms are not in use.



Figure 4.6 The thermo hygrometer

According to the storage system in operation, the materials are arranged according to years and they are numbered and labelled. The stack rooms looked very clean. Acid free boxes are used for storing records. The researcher observed that the Archive used what is referred to as compact shelving. There was inadequate space for shelving and storage of records. This is evident from a picture of the shelves in one of the stack rooms (see Figure 4.8 below).



Figure 4.7 Appearance of shelves in a stack room

4.5.3 Security of records

The researcher observed that it is not easy for users to go to the stack rooms. The doors are securely locked at all times. The security personnel are responsible for locking the Archives after work. Material is fetched by the staff and brought to the user. The material is only used in the reading rooms to keep it safe from theft. Figure 4.9 below shows that the users are also not allowed to go inside the reading rooms carrying their bags and instead they are asked to keep them in the lockers provided by the Archives. This assists in reducing theft of materials.



Figure 4.8 Users lockers

Figure 4.10 below shows that before one enter the Archives, one's details are recorded by the security personnel. Name, contact details and reason/s for visiting the Archives need to be provided.



Figure 4.9 Security room

4.5.4 Finding aids

The finding aid that is available is the index. Users who are unable to use the index can get assistance from the staff. The index in Figure 4.11 below gives the location number of the record that is available in the Archive.



Figure 4.10 Index

4.5.5 Storage of records

The researcher observed that for preservation purposes, acid-free boxes are used. Together with the use of files, this helps to keep records in good condition. Records kept in boxes that are acid free are shown in Figure 4.12 below.



Figure 4.11 Records kept in acid free boxes

The researcher observed that maps are rolled and kept in cylinders for preservation purposes. The name of the map is written with a permanent marker so that it will be easy for the archivist to find a specific map. The Pietermaritzburg Archive possesses original maps of the whole Province of KwaZulu-Natal. Maps are shown in Figure 4.13 below.



Figure 4.12 Maps

The researcher observed that the oversize records are not in good condition. Most of them are fragile. Others are kept on the floor because of inadequate space on the shelves and this results in the deterioration of the oversize records. The researcher also observed that if there are floods these records will be damaged. Oversize records are shown in Figure 4.14 below.



Figure 4.13 Oversize records

4.6 Summary

In this chapter, the results of the study conducted by a self-administered questionnaire, interviews, graphic data and an observation check list were presented. Findings were presented graphically through the use of tables and figures as well as in narrative form. The research findings from the questionnaires and the interviews indicate that preservation is not carried out properly due to the lack of preservation policies, funding, staff training and expertise. The findings also revealed that the Archives did not have disaster plans in place, or sufficient funds to carry out preservation activities. In terms of the observation carried out at the Pietermaritzburg Archive it was revealed that the Archives employs security guards and has intruder alarm systems as well as electronic security systems. This helps to control the loss of material as well as help prevent vandalism. These findings are discussed in light of the relevant literature in the following chapter.

Chapter 5: Discussion of Results

5.1 Introduction

Chapter 5 presents and discusses the major findings as presented in Chapter 4. This is done with regard to the research problem, the literature reviewed and the rationale of the study. The research problem stated that public records and archives in South Africa have been greatly neglected. The purpose of the study was to determine the current situation regarding the preservation of, and access to records at the KZN Archives by answering the following questions:

- What are the policies that are followed to preserve records in the KZN Archives?
- What activities are used to prolong the existence of records?
- How well trained is the staff concerning the preservation of records?
- What measures are taken to ensure disaster preparedness and security of records?
- How adequate is the KZN Archives building for the purposes of preserving records?
- What ways are used to ensure that records are accessible to the public?
- To what extent is the KZN Archives accessible to people with disabilities?
- How do the KZN Archives ensure that records are accessible fairly and equally by the public?

This chapter discusses significant issues based on the data collected from the self-administered questionnaire, interviews, observation schedule, and literature review relating to preservation of, and access to records at the KZN Archives. The discussion responds to the questions listed above. Findings from the questionnaires and interviews are applicable to KZN Archives as a whole and findings from the observation schedule are applicable to the Pietermaritzburg Archives specifically. There was often divergence in the answers given by the members of staff in the questionnaire – some saying one thing, others the opposite and some not knowing or unsure.

5.2 Activities and strategies used to preserve records at the KZN Archives

This section discusses the findings relating to the preservation activities and strategies at KZN Archives. Activities used to preserve records include issues relating to preservation

policy; disaster management and preparedness; security of materials; and standards related to the storage and handling of material.

5.3 Preservation policy

Findings from the questionnaires and interviews indicate that the KZN Archives does not have a preservation policy (despite some staff indicating that such a policy existed). The staff of an institution that does not have a preservation policy essentially have no guidance in terms of preservation and why they need to preserve. Ngulube (2003:285) in this regard has stated that “South African archival professionals were ignorant about preservation policies”. It has been found that many records offices and archives have no written policy about preservation (Feather and Eden, 1997:27) and Ngulube (2003:286), in his paper has also made it clear that many archival repositories in Southern Africa do not have preservation policies. Wamukoya and Mutula (2005:16) are in agreement and point out that most African countries do not have preservation and conservation policies in their archives and information centres.

Feather and Eden (1997:28-29) stated that one of the main reasons for not having a preservation policy is lack of funding. Olatokun (2008:9) stated that “inadequate funding is the greatest problem against successful preservation and conservation of archival materials”. Ngulube (2003:288) also emphasized that “in the past preservation activities were given a low priority”. The present study established that the KZN Archives did not receive adequate funding. The Director of the KZN Archives stated that the current annual budget for the Archives was R6 million. Both the Director and the Principal archivist said the annual budget allocated to the Archives was insufficient. The Director stated that they need a bigger budget for preservation equipment. Archives in general should “have preservation and conservation policies that will include biological management policies which will serve as guides for archival personnel in maintaining a pest- and mould-free environment in the archives” (Ngulube 2003:288).

5.4 The environmental conditions of the stack rooms

This section presents findings related to the environmental conditions of the archive building and stack rooms with regard to temperature, relative humidity, light and pest management. The aim was to determine the conditions under which paper-based materials were preserved.

5.5 Building and stack rooms

Findings revealed that the archive building in Pietermaritzburg was designed and built for the purpose of its current use. This is sometimes not the case with archival buildings – particularly in the African context where existing buildings are adapted for archival use (Nsibirwa 2012:214). Thus most modern buildings have a heating, ventilation and air conditioning HVAC systems and older ones tend not to (Westra, 1987:7). The observation made by the researcher confirms that the KZN Archives building in Pietermaritzburg had HVAC systems in all stack rooms (see Figure 4.7). The results from the questionnaires show that the other branches (Durban and Ulundi) have HVAC systems as well. Having such systems in place is in line with Ngulube's (2003:291) point that many archival institutions in South Africa had HVAC systems. Westra (1987:7) stressed that "environmental control through air conditioning is essential for hot and humid regions such as Natal". However, as stressed in the literature review and in terms of correct archival practice, environmental control through air conditioning is an important factor in terms of the preservation of archival records. The results from the questionnaires reveal that the HVAC systems are serviced once a year. Banks (2000:117) makes the point that the HVAC system should be serviced on a regular basis to make sure it is operating optimally and to prevent mould growth, accumulation of dust and production of destructive gases such as ozone.

5.6 Temperature and relative humidity

The study (through the questionnaire-based survey) found that the temperature and relative humidity were monitored constantly in all three branches of the KZN Archives. Ngulube (2003:292) emphasized that "monitoring is the most dependable tool for decision-making and it holds the most promise for providing conditions favourable to the long-term survival of the records and archives". Sahoo (2007:111) states that "high humidity and high temperatures are

dangerous to records and it is important to maintain a stable temperature and relative humidity because great fluctuations are not good for the records”. Nsibirwa (2012:214) mentions that the Image Permanence Institute (IPI) has noted that libraries and archives have been without adequate environmental monitoring tools for managing records. For that reason, the IPI developed advanced tools for environmental monitoring (Nsibirwa, 2012:214). The tool for environmental monitoring used in the KZN Archives was a thermo-hygrometer. In the stacks rooms the temperature should be around 70 degrees Fahrenheit (21 degrees Celsius) and the relative humidity between 40% and 50% (Baired, 2003:1). The observation that was done in the Pietermaritzburg Archive revealed that the stack rooms are cold and kept at a constant temperature of 22.8 degrees Celsius and the humidity is kept at a constant 54%. The thermo hygrometer that is used to measure temperature and humidity in the Pietermaritzburg Archive is shown in Figure 4.7 in Chapter 4.

5.7 Light

The results from the questionnaires show that the majority of the KZN Archives staff do not know how long the material housed is exposed to fluorescent light and natural light from the windows each day. Any form of light source like sunlight, incandescent or fluorescent light from light bulbs produces energy that accelerates deterioration of records (Nsibirwa, 2012: 214). Sahoo (2007:106) states that “the mechanisms of light are complex and the level of damage by light to materials depends on its intensity, duration of exposure and the distance from the source of light”.

The researcher’s observation in the Pietermaritzburg Archive revealed that though the Archive had fluorescent lights, they were not fitted with ultraviolet (UV) filters to reduce damage caused by the light on the records. However, the windows did have UV film fitted to filter the natural light that causes deterioration of paper. Ngulube (2003:91) states that “exposing material to natural light (sunlight) is detrimental because of its intensity and high ultraviolet (UV) content that causes irreversible damage”. Sahoo (2007:111) emphasizes that “sunlight should be prevented from falling directly on papers because the sun is a great emitter of ultraviolet”. The cheapest way of avoiding sunlight coming onto the material is the old fashioned way of using blinds and curtains on windows (Nsibirwa, 2012:215). Another alternative for protecting material from natural light is to renovate the stack rooms and avoid

having huge windows (Nsibirwa, 2012:215). At the time of observation in the Pietermaritzburg Archive, the records in the stack rooms were not exposed to direct sunlight because there were blinds.

5.8 Pest management

The results from the questionnaires revealed that less than half of the KZN Archive staff believe that all material accessioned were checked for insects/vermin before they were placed in the stack rooms. Ngulube (2003:294) states that “most archival repositories recognized the fact that pests either came into the holdings on their own or as part of incoming of possessions in the archive”. Nsibirwa (2012:215) states that the invasion of doves and cats can be caused by the fact that some archival institutions open windows to cool their stack rooms making an easy entry point for them as well as insects and vermin.

The results from the questionnaires revealed that some (20%) of the KZN Archives’ staff were unsure about whether their Archive building had ever experienced an invasion and infestation of pests. Ngulube (2003:295) points out that “if archivist and record managers are ignorant of the processes involved in treating their holdings, then management of pest in archival holdings will remain an unfulfilled dream in South Africa”. Cockroaches, bookworms, spiders, fleas and dust mites are attracted by warm and humid conditions (Hunter, 1997:144). Archives are encouraged to use an Integrated Pest Management Programme which focuses on minimal use of chemicals combining diverse mechanical, cultural and biological methods (Nsibirwa, 2012:217). Ngulube (2003:294) suggests that “the use of chemicals can create super-pests, with an increased resistance to pesticides”. On the other hand, Sahoo (2007:112) is of the opinion that “dry neem leaves, neem seed powder and camphor tablets tied in muslin bags should be kept inside the racks for keeping the pest away”. Nsibirwa (2007:101) further suggests that good house-keeping habits, including regular cleaning of the stack rooms, can reduce the invasion of pests.

5.9 Storage and handling

The present study (through questionnaires) revealed that a majority of the KZN Archives’ staff do not know how the stack rooms are cleaned. The observation done in Pietermaritzburg Archive revealed that while the stack rooms in general were clean, some were not. Adequate

space, general cleanliness of the storage area and the way people handle material affects the life of the archival material (Nsibirwa, 2012:217). Ngulube (2003:297) found that the situation of cleanliness in archival institutions in South Africa to be satisfactory because users and staff were trained in the handling of records.

Ngulube (2003:298) states that “Preservation advocacy is a key component to protecting collections by engaging and convincing staff to think about how their actions affect the collections”. Sahoo (2007:112) states that the archival material should be shelved properly and they must not be over-packed. The researcher observed that there was a problem with shelving, which is shown in Figure 4.14 in Chapter 4 where some of the boxes of records were placed on the floor. Nsibirwa (2007:101) states that this could lead to major damage especially in the case of a water disaster. The results from the questionnaire, interviews and the observation done by the researcher in the present study confirm that there was inadequate space for shelving records. The results from questionnaires also revealed that 40% of the respondents believed that users were not given guidelines for handling of archival material. The most important preservation activities are the preventative ones, such as training staff and users to handle archival materials (Baird, 2003:91). It is to this issue that the discussion now turns.

5.10 Training of staff

The results from interviews revealed that the KZN Archives staff are not well trained in preservation even though all have a tertiary education. Nsibirwa (2007:105) revealed that staff directly involved in preservation and conservation activities might not have been trained in major conservation processes. Nsibirwa (2007:105) stated that “a majority of people possibly studied their library science degree many years ago when institutions in South Africa did not include preservation management in the curriculum”. Rosenberg (2001:17) points out that before the mid-1990s there was a lack of archival and preservation training in Africa and most archivists and conservationists had to receive training overseas. Ngulube (2003:316) confirms that “there is a critical shortage of staff with expertise to preserve records and archives in South Africa”. Findings from the present study confirm this.

Both interviewees said there are personnel carrying out preservation activities trained in preservation techniques. However, both interviewees stated that the personnel have very

basic training preservation techniques. Nsibirwa (2012:225) is of the opinion that “the main reason for preservation is for people to be able to access the publications for posterity and therefore future generations will get to learn about their national heritage”. Feather (2004:1) emphasises that “everything we have inherited from the past has come down to us because it has been preserved”. Hence the recruitment of trained personnel is vital.

5.11 Disaster preparedness and management

Disaster planning is an important tool of preservation and “there is no archival institution that is completely free from the destruction that can happen as a result of human-made or natural disasters” (Nsibirwa, 2007:102). Nsibirwa (2012:219) states that “South Africa like many other countries has been affected by increased temperatures as well as heavy rainfall, causing floods that threaten the preservation of our cultural heritage”. A disaster plan is very important because it contains information that can be used to prevent the situation from getting worse, situations which could include human made disasters such as leaking roofs and pipes (Varlamoff and Plassard, 2004:27). Ngulube (2003b:58) states that “there are insufficient resources as well as limited training about disaster preparedness”. The study revealed that there were respondents in the questionnaire survey who were of the opinion that the Archives did not have a disaster preparedness and recovery team and this was confirmed by the interviewees. This is shown in Chapter 4 in Table 4.4. The researcher observed that because of inadequate shelving, many records were stored on the floor which is not safe in the case of any type of water disaster. This is shown in Chapter 4 in Figure 4.14.

5.12 Fire detection and suppression

Figure 4.4 clearly shows that the majority of respondents, nine (60%), indicated that the Archives have a fire detection system in the stack rooms. The researcher observed that the Pietermaritzburg Archives did indeed have a fire detection system. Nsibirwa (2012:221) underscores the importance of having such a system in place when she states that “damage from fire is usually permanent and irreversible as materials are turned to ash”. Hunter (1997:165) reinforces this point and notes that “in order to detect and suppress fires archives need smoke detectors, fire extinguishers and sprinkler systems that are designed to discharge

water only in the immediate area of the fire”. It was not clear whether this was the case with the KZN Archives.

5.13 Security

The results from questionnaires revealed that all three branches of the KZN Archives had an electronic security system, closed circuit television cameras (CCTV), and an intruder alarm system. The Archives also has security personnel as well. This is shown in Chapter 4, Figure 4.10. Nsibirwa (2012:221) makes the important point that “apart from protecting collections from natural disasters, the collection needs to be protected from theft”. Through observation the researcher found that it is not easy for users to access the stack rooms in the Pietermaritzburg Archives as the doors are securely locked at all times. The security staff is responsible for locking the Archives after work. Archival material can only be used in the reading rooms and this assists in limiting possible theft. In addition, users are not allowed to go inside the reading rooms carrying their bags. Bags have to be placed in lockers provided by the Archives.

5.14 Access to records

The study determined whether the KZN Archives were accessible to the public and the processes that make the records accessible. In order to achieve this, the researcher examined the legislation affecting access, the practice of access by the Archives and the equipment used to facilitate access. In terms of legislation, the Promotion of Access to Information Act (PAIA) of 2000 (Act No. 2), gives individuals the constitutional rights of access to any information held by government.

The results from the questionnaire survey reveal that all records housed in the Archives were ostensibly open to use at the present time. However, (and the reason for using the term ostensibly), there were respondents who said not all records were open to use. Their explanations were as follows: a respondent in the Pietermaritzburg Archives stated that there were documents such as the estates which were very old (100 years or more) which have been withdrawn from consultation. A Durban Archives respondent noted that damaged records were closed to the public. Finally, a respondent from the Ulundi Archives pointed to

some archival material requiring permission from the source or donators before they could be used. Forde (2005:199) states that “preservation still has to precede access and it is important for archivist to balance the interest of the users and at the same time the need to safeguard records on the other hand”. It does appear that this was the case at the KZN Archives.

The results from the questionnaires indicate that the majority (66.7%) of the respondents said users were not being made aware of their access rights and their responsibility to comply with the policies and regulations of the Archives. This is of concern. Nsibirwa (2012:226), for example, states that “marketing is part and parcel of the OPDs for public awareness of access to official publications and any information held by other institutions”. In addition, Ngulube (2003:322) is of the opinion that access to records could be “governed by the existence of finding aids, rules of access, equipment to facilitate access and the knowledge of the existence of the holdings”. Darch and Underwood (2005:82) state that “it seems likely that at least part of the difficulty lies in South Africa’s cultural and linguistic diversity, and in the fact that not only information but also the actual discourse of power remains inaccessible to many of the historically excluded sectors of society”. Whether the issue of cultural and linguistic diversity is playing a role in users not being made aware of their access rights is not clear. Also of concern is that the results from the questionnaires show that eight (53.3%) of the respondents said users were not being made aware of their obligation to comply with copyright legislation and access conditions. This is shown in Table 4.10 in the previous chapter.

The study through the questionnaire, interviews and observations revealed that the KZN Archives buildings are accessible to physically disabled people. People with disabilities “should be able to arrive at the site, come near the library or archive building and enter the building without difficulty and safely. If the main entrance cannot be made accessible, a secondary accessible doorway should be made available, equipped with an automatic door opener, a ramp, and a telephone” (Irvall, 2005:4).

However, three (20%) of the respondents in the questionnaire survey said that access to the material in the actual building was limited for people with physical disabilities. One respondent stated the following: “Access is there but is limited, for instance entry to the reading room.” A second respondent pointed out that “The building is not user friendly because the Archive in Durban has no lift therefore it is not accessible to people who use

wheelchairs”. Both interviewees stated that there was insufficient physical and technical equipment to facilitate easy and safe access to all types of archival material held. In terms of access, Irvall (2005:4) states that “all people should be able to use the archives of a country”.

He goes on to say that

the environment of the archive, the entrance, restrooms, stairs, elevators and special rooms should be accessible for persons with different types of disabilities. A person in a wheelchair should be able to get to all departments, a visually impaired person should be able to walk with a cane or a guide dog and find his/her way without bumping into any obstacles. A deaf person should be able to make conversation with the archive staff. A person with an intellectual impairment should be able, without difficulty, to find books and archival materials. A person with dyslexia or other reading problem should be able to find a way of accessing information (Irvall, 2005:4).

The results from the questionnaires show that 10 (66.7%) of the respondents believed that records are accessible fairly and equally by the public. The Director of the KZN Archives when interviewed stated that records are accessible to every citizen regardless of race or class. The Principal Archivist of the Pietermaritzburg Archive stated that they treat all users with respect and they make sure that all users get the information they want. Both interviewees pointed out that there was a photocopying and reading room service in all three of the branches and this helped to ensure that records were accessible fairly and equally by the public. They also noted that the access rules applied equally to everyone without discrimination.

While archival institutions provide equal access to users, there are certain constraints that may require the archivist to make distinctions between researchers (International Council on Archives, 2012:9). For instance, people who need access to archives for human rights purposes are given access to the relevant archives even if access is denied to the general public. Furthermore, public archival institutions must not charge an admission fee to people who want to do research. Archivists have access to all records in their custody in order to preserve, arrange and describe them. They help their institutions to establish access policies and they work with lawyers on the interpretation of restrictions (International Council on Archives, 2012:9-11).

However, there are results from the questionnaires that show that some respondents (13.3%) believed that records were not accessible fairly and equally by the public at the KZN Archives. There may be restrictions within the institution for the protection of personal data and commercial secrets. Access to donated records is limited by conditions (International Council on Archives, 2012:9).

The Director of the KZN Archives stated that more space to store records is needed then it will be easy for the staff to find records in the stack rooms for users when they need them. According to the Director, the current priority in terms of access to the collection for users was the need to scan the Department of Home Affairs records. Both interviewees stated that because of locations and the distances involved, the KZN Archives is not accessible to the majority of the population in KwaZulu-Natal. The Director felt that a solution lay in the development of a digital archive and that once this was done it would be more accessible to potential and actual users. In this regard, Nsibirwa (2012:134) states that “the advent of new information technologies brings a different aspect of access”. Forde (2005:194) is of the view that “access to documents has much to do with this explosion of interest [in digitizing archival materials], both for those who are able to go to the archive and those who are less able to travel to an archive”. Nsibirwa (2012:134) thus notes that “it is not only the delivery of information that has changed but physical access to publicly funded archives has improved a lot”. Keakopa (2008:10) states that “technology has changed the way information professionals acquire, process, store and provide access to electronic documents from various geographical locations”. It is very apparent, as Nsibirwa (2012:134) points out, that the demand for access to these resources has grown rapidly including the means to deliver them.

5.15 Summary

In this, the penultimate chapter, the major findings of the study were discussed. This was done in relation to the research problem, the literature reviewed and the rationale of the study. The research questions posed provided a structure for the chapter. It is evident that while preservation of and access to archival materials at the KZN Archives is taking place, there are challenges which can be attributed to inadequate funding. All aspects of the Archive are affected to a greater or lesser degree and these include the environmental conditions of the stack rooms, pest management, handling of material, disaster preparedness and security, and

access to records. Also a funding issue is the fact that the archival staff needs further training in the field of preservation management.

The following and final chapter makes conclusions and recommendations based on the findings of the study.

Chapter 6: Summary of Findings, Conclusions and Recommendations

6.1 Introduction

This chapter provides the summary of the significant findings, conclusions and recommendations of the study. The chapter ends with recommendations for further research. The content of the chapter will include a broad range of issues from the literature reviewed in Chapter 2, the findings of the study presented in Chapter 4 and the interpretation of findings in Chapter 5 as well as insights gained from the study. The content is furthermore guided by research questions which underpinned the study. To begin with, the summary of the study is provided below.

6.2 Summary of the study

Chapter 1 comprised the background and research problem, key questions, broader issues, rationale for the study, delimitations of the study, definitions of terms, conceptual framework, and, briefly, the research methodology adopted. An outline of the structure of the remainder of the thesis was also provided.

Chapter 2 contained the literature review. The literature review investigated issues relating to the preservation of, and access to archival material. The review focused on the policies for preserving records, training of staff, prolonging the life of records, disaster management, security, archival buildings and access to records. The nature and role of archives was discussed. The two theories which underpin this study, namely, the records life cycle theory and the records continuum theory, were discussed as well. The literature consulted for this study included books, dissertations, theses, and research papers and journal articles about preservation, access, archives, and public records.

The research methodology was described in Chapter 3. This chapter covered research paradigms, the research approach adopted in the study, the research design, the population, data collection techniques and procedures, and data analysis. The important issues of validity and reliability in relation to the research instrument were also discussed.

The findings of the study were presented in Chapter 4. The presentation of the findings was done via tables and figures.

Chapter 5 consisted of a discussion of findings as presented in the previous chapter. The findings were related to the key research questions which structured the content of this chapter.

The present chapter, Chapter 6, as mentioned above, presents the main findings of the study, together with the conclusions and recommendations that emerge from these. The chapter ends with suggested topics for further research.

6.3 Main findings

This section summarises the main findings of the study as per the research questions.

6.3.1 What are the policies that are followed to preserve records in the KZN Archives?

- The KwaZulu-Natal Archives does not have a specific policy in place relating to preservation of records or to the training and recruitment of qualified staff.
- However, while there is a mission statement, it does not specifically refer to the preservation of records.

6.3.2 What activities are used to prolong the existence of records?

- The temperature and relative humidity were monitored constantly.
- The KZN Archives staff do not know how long the material was exposed to fluorescent light and natural light from the windows each day. The lights in the stack rooms were turned off when not in use. The Pietermaritzburg Archive has fluorescent lights but they were not fitted with ultraviolet (UV) filters to reduce damage caused by the light on records. However, the windows do have UV film fitted to filter the natural light that causes deterioration of paper.

- Less than half of the KZN Archives staff who participated in the study were of the opinion that all materials accessioned were checked for insects/vermin before they were placed in the stack rooms. Some of the staff did not know how the stack rooms were cleaned. Furthermore, there were staff who were unsure about whether the Archives had ever experienced an invasion or infestation of pests in the buildings.
- A feather duster is used when cleaning the stack room and the floors are mopped. However, from personal observation of the Pietermaritzburg Archives, it was evident that some of the stack rooms were dirty.
- In addition, there was inadequate space for shelving and storage and some records were not shelved in the correct manner, in that some of the boxes of records were placed on the floor.

6.3.3 How well trained is the staff concerning the preservation of records?

- While there are personnel carrying out preservation activities, they were not adequately trained in preservation techniques. This was evident, for example, in most staff lacking basic knowledge in the fundamentals of preservation activities, such as environmental control.
- At a broader level, while all the staff indicated that they had tertiary education, it was evident that only a few had formal training in preservation management or archival science.

6.3.4 What measures are taken to ensure disaster preparedness and security of records?

- The KZN Archives does not have a written disaster preparedness and recovery plan in place.
- In the Pietermaritzburg Archive some records, as noted above, were stored on the floor which is not safe in the case of any type of water disaster.
- The KZN Archives have a fire detection system in the stack rooms as well as an electronic security system, closed circuit television cameras (CCTV), and an intruder alarm system. It is not easy for users to go to the stack rooms given that the doors are securely locked at all times.

- The security staff are responsible for locking the archival buildings after work. Archival materials can only be used in the reading rooms and this helps ensure that the materials are kept safe from theft. In addition, the users are not allowed to go inside the reading rooms carrying their bags. Instead they are asked to keep them in the lockers provided by the archives.

6.3.5 How adequate is the KZN Archives building for the purposes of preserving records?

- The archive building in Pietermaritzburg was designed and built for the purpose of its current use.
- Neither the Ulundi branch or the Durban branch of the archives have purpose built buildings and both were using buildings adapted for archival purposes. Thus, for example, the archives in Durban and Ulundi do not have lifts and are therefore not user friendly to people with disabilities. This was mentioned in Chapter 4.4 in the interviews.
- The KZN archives building in Pietermaritzburg has HVAC systems as did the two other branches. However, the HVAC systems are only serviced once a year .

6.3.6 What ways are used to ensure that records are accessible to the public?

- Some of the records were not open to the public to use at present. For example, documents such as estates that are very old (100 years) have been withdrawn from consultation.
- Damaged records were not made available to the public.
- There were also some records which require permission from their donators before they could be accessed by users.
- Users were being made aware of their access rights and their responsibility to comply with the policies and regulations of the Archives. However, users were not being made aware of their obligation to comply with copyright legislation and access conditions.

6.3.7 To what extent is the KZN Archives accessible to people with disabilities?

- The building in Pietermaritzburg is accessible to physically disabled people. It is user friendly and has a lift.
- The reading room is accessible by wheelchair and toilets are also accessible. There are ramps available and the parking space is available for people living with a disability. There is a lift for both able and disabled.
- However, as noted above, the archives in Durban and Ulundi have no lifts therefore they are not accessible to people who use wheelchairs or who may struggle, for whatever reason, to climb stairs.

6.3.8 How do the KZN Archives ensure that records are accessible fairly and equally by the public?

- Records are accessible fairly and equally by the public. Fair and equal access to records is ensured by means of outreach programmes. Users access records in the reading rooms free of charge.
- They all receive professional assistance through the archivist on duty. Every member of the public is allowed to access files and they are not limited (except for the various categories or records pointed to above). As emerged in the interviews, users are treated with respect, and each user is considered unique getting the attention that they deserve.
- If the archivist cannot help the user they direct the person to the appropriate institution. There is no discrimination in accessing the Archives. They ensure that they operate according to the rules of the National Archives Act and Promotion of Access to Information Act.
- The archivists know that they are information professionals and cannot deny access to information to any person. However, given the size of the Province and the great distances often involved in accessing any one of the archival branches, it can be argued that the KZN Archives is not accessible to the majority of the population in KwaZulu-Natal. While this can be ameliorated by digitization of the contents of the Archives and subsequent on-line access, the problem of the digital divide which

ensures that many people do not have the relevant information and communication technologies or Internet access, will mean that access remains problematic.

6.4 Conclusions regarding the research problem

The research problem as encapsulated in Chapter 1 is that “the preservation of public records and archives, in general and vulnerable records, particularly in South Africa has been greatly neglected” (Ngulube, 2003:18). As has been stressed, without preservation there will be no access, in view of the fact that access hinges on adequate preservation methods. Also crucial, as Ngulube (2003:1) pointed out, “preservation as a collection management strategy is a key to long term access to records and archives”. In light of the main findings of the study outlined above, it can be concluded that:

- There is no policy in place to guide the preservation of records in the KZN Archives.
- While certain activities such as the constant monitoring of temperature and humidity are in place to prolong the existence of records, more could be done in this regard. One can point, for example, to the poor shelving of the records in certain instances and dirt in the stack rooms.
- Materials accessioned were not checked for insects/vermin before they were placed in the stack rooms.
- The Pietermaritzburg Archive had fluorescent lights but they were not fitted with ultraviolet (UV) filters to reduce damage caused by the light on records.
- Some of the staff have a tertiary education but they do not have archival qualifications (archival science) or any training in preservation management.
- There is no written disaster and recovery plan in the KZN Archives.
- There is insufficient space for records and as a result some of them are placed on the floor and they are vulnerable to any water disaster.
- Durban and Ulundi archives are adapted buildings; they were not built with the purpose of preserving records.
- Users were not being made aware of their obligation to comply with copyright legislation and access conditions.
- The KZN Archives is not accessible to the majority of the population in KwaZulu-Natal because of distances.

- Finally, it can be concluded that preservation of, and access to records at the KwaZulu-Natal Archives requires attention.

As a result of the findings and conclusions outlined above, the following recommendations are put forward for consideration.

6.5 Recommendations

As the conclusions above attest, it is evident that preservation of and access to the records at the KZN Archives could be improved in a number of respects and it is with this in mind that the recommendations below are made. Once again, the research questions that guided the purpose of the study will be used as a basis for the recommendations.

What are the policies that are followed to preserve records in the KZN Archives?

- It is recommended that the KZN Archives should develop a preservation policy so that it will guide them when implementing preservation practices to ensure good preservation methods. In addition, given the importance of preservation, the KZN Archives should consider including preservation in its mission statement to create, together with policy, a foundation for preservation.

What are activities used to prolong the existence of records?

The following recommendation is taken directly from Plume (2000:10):

- “It is recommended that the stack rooms should be cleaned on a regular basis using a vacuum cleaner, which sucks up the dust rather than re-circulating it. Good housekeeping and maintenance of optimal storage conditions would help prevent the breeding of pests even in future. The practice of using insect repellents such as naphthalene bricks, dry neem leaves and camphor tablets tied in muslin bags could keep the pests away. The staff needs to be observant about checking new materials for signs of insects and if necessary, items should be treated before they are integrated with the existing collection” (Plume 2000:10).

- It is also recommended that there should be more space for shelving and storage of records. Lights need to be fitted with ultraviolet (UV) filters in order to avoid damage caused by the light on records.

How well trained is the staff concerning the preservation of records?

- It is recommended that the staff of the KZN Archives need on-going training and assistance through workshops, seminars and conference attendance. As Ekwelem (2011:4) points out “All staff should receive training in preservation, to ensure that each person understands, and is committed to, the preservation programme”. In terms of training, the KZN Archives can also involve professional associations such as the South African Society of Archivists (SASA), ESARBICA and the Library and Information Association of South Africa (LIASA) to train staff, in-house. To add force to the training and underscore the importance of preservation, preservation should be made part of each employee's job description. It is acknowledged that successful training can only be accomplished with adequate finances being made available and the need for such is pointed to below.

What measures are taken to ensure disaster preparedness and security of records?

- It is recommended that the KZN Archive needs to draw up a disaster plan to work out a programme with concrete goals, identifiable resources and a schedule of activities for eliminating as many risks as possible. Apart from drawing up a plan, the staff need to be trained to implement the plan and to be prepared for any type of disaster, especially water disasters, which are the most common. This would help to reduce the effects of the disaster, by having the staff respond well to the situation by salvaging materials and handling them properly. Security can be improved by reminding and encouraging the security personnel to be more cautious and by making them understand the value of the cultural heritage.

How adequate is the KZN Archives building for the purposes of preserving records?

While the environment of the stack rooms is monitored, more could be done in this regard.

- It is recommended that data loggers, thermo-hydrographs and similar instruments need to be bought and staff need to be trained how to use them in monitoring the environment. The fluorescent lights should be covered with UV filters and staff should switch off the lights when the stacks are not being used. Natural light through the windows should be blocked out using UV filter film or even curtains, blinds or shades. The HVAC system should be serviced at least twice a year not once a year.

What ways are used to ensure that records are accessible to the public?

While it is evident that archival staff ensure that records are open and accessible to the public, it is a reality that many people, who may well benefit from having access to the Archives, do not do so because of distances involved.

- It is recommended that the KwaZulu-Natal Archives give serious consideration to digitizing the records housed and making such records available online. Access for people who cannot physically come to the Archives would then be possible (assuming they have the necessary resources to do so). In addition, the Archives will, in practice, be available 24/7 for people to access.

To what extent is the KZN Archives accessible to people with disabilities?

- It is recommended that the Durban and Ulundi branches of the KZN Archives should consider installing a lift so that they will be accessible to people who use wheel chairs.

How do the KZN Archives ensure that records are accessible fairly and equally by the public?

According to the findings, the KZN Archives is accessible fairly and equally by the public.

- However, it is recommended that this principle should always be at the forefront and emphasized to both the staff and users to ensure that no discrimination and inequality will take place even in the future.

6.6 Concluding recommendation:

It is evident that much of what has been recommended above cannot take place without adequate finances.

- Finally, it is recommended that urgent attention be given to funding of the Archives generally and funding of preservation activities specifically. This is an issue which needs to be taken up with the provincial government and relevant policy makers. While funding from official sources is of crucial importance to the existence of the KZN Archives, it may also consider embarking on fundraising activities.

6.7 Suggestions for further research

It is suggested that studies similar to this one be replicated in other provinces in South Africa. Studies into the preservation of and access to records in the other provincial archives would raise the awareness of the importance of preservation and access amongst policy makers and the various governments and highlight the challenges, problems and concerns regarding the preservation of and access to the South African heritage.

6.8 Summary

Chapter 6 comprised a summary of the study, the main findings, the conclusions, recommendations and suggestions for further research. Much of the content was underpinned by the research questions asked.

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Appendices

Appendix 1: Permission to collect data



Department:
Arts & Culture
PROVINCE OF KWAZULU-NATAL

KWAZULU-NATAL ARCHIVES AND RECORDS SERVICES PIETERMARITZBURG ARCHIVES REPOSITORY

Enquiries: PG Nel

Reference: P13/2

Dear Mr Mtshali

Permission is hereby granted to you to conduct a survey at the Pietermaritzburg Archives Repository in pursuance of your studies.

This is on condition that you provide this Repository with a hard copy of your thesis and also do a presentation of your findings to Repository management, on conclusion of your studies.

I wish you success with your Masters.

Kind regards

HEAD: PIETERMARITZBURG ARCHIVES REPOSITORY
18 JULY/2014



Heritage House 222 Jabu Ndlovu Street, Pietermaritzburg, 3200
Tel: +27 033 264 3400 | Fax +27 (033) 342 2516

Appendix 2: Interview schedule

Interview schedule

Interview Schedule for collecting information on preservation of and access to records in KwaZulu-Natal archives.

Interviewer: Sbusiso Mtshali

Date of Interview :

INTRODUCTION:

I am a student at the University of KwaZulu-Natal doing Masters in Information Science. I would like to ask you a few questions about the study I am conducting on archival materials at your institution/repository. The purpose of the study is to identify how records are preserved and accessed in KwaZulu-Natal archives. The survey is designed to collect data about preservation policies and procedures, storage and handling of archival materials, access to materials and education and training of staff for preservation of these materials. All replies will be treated in the strictest confidence and will not be attributed to particular respondents, organisations, or departments. I realise that there are many other demands on your time, but, the results will be beneficial to all those with responsibility for preserving archival materials. The results of the survey based on the findings may be used as a proposal.

Demographic Data

1. Male ☐ Female ☐

2. Which age group do you fall under?

Under 20		30		40		50	60		Over 60	
-------------	--	----	--	----	--	----	----	--	------------	--

3. What is the highest level of education you have reached?

(Please specify the level)

☐ Primary school - Grade.....

☐ High school - Grade.....

- ☐ Technikon - Qualifications.....
- ☐ University - Qualifications... ..
- ☐ Other.....

PRINT MATERIALS

Preservation policies

4. Does your organisation have a mission statement?

Yes		No, go to number 6		Unsure, go to number 6	
-----	--	-----------------------	--	------------------------------	--

5. If you answer to question 4 is —Yes, please state your mission statement ...

.....

6. Does your archive have a policy to:

a) Improve preservation conditions

Yes		No		Unsure	
-----	--	----	--	--------	--

b) Develop conservation facilities

Yes		No		Unsure	
-----	--	----	--	--------	--

c) Train qualified personnel

Yes		No		Unsure	
-----	--	----	--	--------	--

7. Does your institution have a preservation policy?

Yes		No		Unsure	
-----	--	----	--	--------	--

8. If, yes can you provide me with a copy or a link to it?

9. If yes to question 8, overall, how successful do you consider your current preservation policy/strategy is in achieving your institution's preservation goals?

a) Extremely successful	
b) Successful	
c) Moderately successful	
d) Unsuccessful	
e) Not successful at all	

10. Please explain the reasons for your answer to the previous question about you're the success of your current preservation policy/strategy?

11. What is the current annual budget for the archive?

12. What percentage of the annual budget is allocated to the archive?.....

13. Is the allocation sufficient?

Yes		No	
-----	--	----	--

14. If no to question 13, please specify

.....

Disaster preparedness and management

15. Is there a written disaster preparedness and recovery plan for your institution?

Yes		No, go to number 21	
-----	--	------------------------	--

16. If —Yes, please choose the aspects that it covers from the list below.

a) It deals with safe evacuation of people	
b) It deals with records	
c) It deals with the building	
d) It describes emergency procedures	
e) It outlines disaster response	
f) It lists emergency supplies	
g) Unsure	

h)Other,pleasespecify.....

17. Please name all the natural disasters covered by your plan.

a) Floods	
b) Earthquakes	
c) Tornados	
d) Mould	
e) Insects	
f) Unsure	

g)Other,pleasespecify.....

18. Please name all the human-made disasters covered by your plan

a) Fire	
b) Bomb threats	
c) Vandalism	
d) Unsure	

e) Other, please specify.....

19. When was your disaster preparedness and recovery plan last tested?

.....

.....

.....

20. When was your disaster preparedness and recovery plan last reviewed?

☐ Unsure

21. Are the personnel carrying out preservation activities trained in preservation techniques?

Yes		No		Unsure	
-----	--	----	--	--------	--

Access to information

22. Are users' interests and needs analysed at regular intervals, and policies and practices adjusted accordingly?

Yes		No		Unsure	
-----	--	----	--	--------	--

23. If yes to question 22 please describe how?.....

24. Is there sufficient physical and technical equipment to facilitate easy and safe access to all types of archival materials held?

Yes		No	
-----	--	----	--

25. Are access facilities adequate for the physically challenged (disabled) your institution?

Yes		No		Unsure	
-----	--	----	--	--------	--

26. What are your current priorities, in terms of access to the collection for users?

.....

27. To what extent is the KZN Archives accessible to the majority of the population in KZN?.....

28. How do the KZN Archives ensure that records are accessible fairly and equally by the public?.....

Appendix 3: Questionnaire

Questionnaire

Questionnaire for collecting information on the preservation of, and access to records in KZN Archive, Pietermaritzburg.

Instructions for filling in the questionnaire

- a) Please mark X the applicable answer(s).
- b) Use spaces provided to type or write your answers to the questions. Please print if you write.
- c) Please, do not leave blank spaces. If the question does not apply please indicate —N/A.
- d) If you use additional sheets of paper for detailed answers, please, indicate in all cases the question number you are referring to.

Demographic Data

1. Are you:

Male		Female	
------	--	--------	--

2. Which age group do you fall under?

Under 20		20-30		31-40		41-50		51-60		Over 60	
----------	--	-------	--	-------	--	-------	--	-------	--	---------	--

3. What is the highest level of education you have reached?

Primary school	Grade.....
High school	Grade.....
Technikon	Qualifications.....
University	Qualifications.....
Other

PRINT MATERIALS

Preservation policies

Preservation is the process in which all actions are taken to check deterioration. This includes preventative measures (good housekeeping) and conservation which is the curative measure of reversing the effects of time.

4. Does your archive have a policy to?

a) Improve preservation conditions.

Yes	No	Unsure
-----	----	--------

b) Train qualified personnel

Yes	No	Unsure
-----	----	--------

The environmental conditions of stack rooms

Temperature and relative humidity

5. Does your building have a heating, ventilation and air conditioning (HVAC) system in the stack rooms?

Yes	No go to number 11	Unsure
-----	--------------------	--------

6. Does the HVAC system provide constant climate control throughout the year?

Yes	No	Unsure
-----	----	--------

7. How often is the HVAC system serviced?.....

8. Is the temperature level in the stack rooms monitored constantly?

Yes	No
-----	----

9. Is the relative humidity (RH) level in the stack rooms monitored constantly?

Yes		No		Unsure	
-----	--	----	--	--------	--

Lights

10. For how many hours are materials exposed to artificial light during the day?

.....hours

	Unsure
--	--------

11. Are lights in the stack room turned off when not in use?

Yes		No		Unsure	
-----	--	----	--	--------	--

Pest management

12. Are all materials that are to be accessioned checked for insects/vermin in a separate storage area before they enter the stack rooms?

Yes		No		Unsure	
-----	--	----	--	--------	--

13. Have you ever experienced any insect invasion or vermin infestation in the building?

Yes		No		Unsure	
-----	--	----	--	--------	--

Storage and handling

14. How are the stack rooms cleaned?.....

	Unsure
--	--------

15. Is there adequate space for shelving and storage?

Yes		No	
-----	--	----	--

16. Are there written guidelines for handling of materials for staff?

Yes		No		Unsure	
-----	--	----	--	--------	--

17. Are there written guidelines for handling of materials for the users?

Yes		No		Unsure	
-----	--	----	--	--------	--

Disaster preparedness and management

18. Is there a disaster planning team in place?

Yes		No		Unsure	
-----	--	----	--	--------	--

Fire detection and suppression

19. Do the stack rooms have a fire detection system?

Yes		No		Unsure	
-----	--	----	--	--------	--

Security

20. What security systems exist in the building? (Please tick or mark X all the applicable options).

Employ security	
Electronic security	
Closedcircuit television cameras (CCTV)	
Intruder alarm system	

21. How effective do you think your security system has been since it was installed?

Very effective	
Effective	
Moderately	
Not effective	
Not effective at all	

22. Have you observed deterioration resulting from the use of documents by the users?

Yes		No	
-----	--	----	--

Access to information

23. Are all records open to use at present?

Yes		No		Unsure	
-----	--	----	--	--------	--

24. If your answer is —No to question 23, please explain why access is limited...

.....

.....

.....

.....

25. Are users made aware of their access rights and their responsibility to comply with the policies and regulations of your institution?

Yes		No		Unsure	
-----	--	----	--	--------	--

26. If your answer is —Yes to question 25, how is this done? ...User are given a user guide to

peruse.....

.....

.....

.....

 27. Are users made aware of their obligation to comply with copyright legislation and access conditions when using information contained in archival materials?

Yes		No		Unsure	
-----	--	----	--	--------	--

28. If your answer is —Yes| to question 27, please describe how this is done.

29.To what extent is the KZN Archives accessible to physically disabled people?.....

30. How do the KZN Archives ensure that records are accessible fairly and equally by the public?.....

Appendix 4: Observation guide

Observation guide for collecting information on preservation of, and access to, records at the KwaZulu- Natal Archives.

Name of stack room.....

Date..... **Time**.....

Location

Where is stack room located?.....

The environmental conditions of stack rooms

Is there a heating, ventilation and air conditioning (HVAC) system?

.....

Is the HVAC system on?.....

Is the stack room hot or cold?.....

What is used to measure humidity?.....

What type of lights are used?.....

Are lights in the stack room turned off when not in use (when there is no one in the stack room)?.....

Physical appearance of the stack room

How are the materials

arranged?.....

Are the materials in order?.....

Are they numbered and labeled?.....

Is the stack room clean?... ..

What type of shelving is used?.....

☐ Wooden

☐ Metal

☐ Compact or high density

☐ Other.....

Is there adequate space for shelving?

.....

Is there adequate space for storage?

.....

Security

Is it easy for users to go into the stack room?

.....

Are the doors locked at all times?

.....

Who is responsible for locking the archive?.....

What measures are taken to protect the materials while they are being used.

.....

What measures are taken to protect the materials while they are not being used?

.....

Finding aids

What finding aids are available?

.....

Does the user have access to these finding aids?.....

Does the staff have access to these finding aids?.....

Preservation

What basic preservation measures have been taken?

Use of boxes []

Use of files []

Use of brown paper []

Use of Mylar (jiffy) bags []

What is the general condition of materials?

.....
.....
.....
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Appendix 5: Covering letter

Covering letter for the survey instrument for collecting information on preservation of, and access to records at the KZN archives in Pietermaritzburg.

Dear Sir/Madam

I am a student at the University of KwaZulu-Natal doing a Masters in Information Studies. I am seeking your assistance in my research project. The purpose of the study is to identify how records are preserved and accessed at the KZN Archives in Pietermaritzburg.

The survey is designed to collect data about preservation policies and procedures, storage and handling of records, access to records, and education and training of staff for preservation of these records. All replies will be treated in the strictest confidence and will not be attributed to particular respondents, organizations, or departments. I realize that there are many demands on your time, but the results will be beneficial to all those with the responsibility for preserving records at the KZN Archives.

The school of Information studies in the University of KwaZulu-Natal said I must request a written permission from you, which will be a proof that I will be investigating about the preservation and access to records at KZN Archives in Pietermaritzburg. I will be grateful if my request is successful. If you have any queries about the study, please do not hesitate to contact me.

Thank you for your time and cooperation.

Yours faithfully

Sbusiso Mtshali

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