CHAPTER ONE
INTRODUCTION

Background to the Study

Library is a storehouse of knowledge that facilitates teaching, learning and research activities in the university. It is the central point of all academic activities in the university whose main objective is to assist the institution in which it is established to achieve excellence in teaching, research and extension work. According to Oluwaniyi (2010), library is one of the social institutions that have the primary role of acquiring, processing, organizing, as well as preserving the print and non-print information resources for users. Aguolu and Aguolu (2002) explained that the academic health, intellectual vitality and effectiveness of any university depend largely upon the state of health and excellence of its library. Furthermore, Akporhornor (2005) opined that library is an indispensable facility of any educational institution and that a well-equipped and preserved library is therefore very crucial to the educational and general information needs of lecturers, students and its community. This is why the thought of stocking library with adequate information resources comes in mind when a university is to be established.

More so, universities are responsible for the production of higher level manpower for national development. The extent to which universities are able to effectively accomplish this task depends largely on how well their

libraries are equipped with relevant information materials. Besides, proper dissemination of information materials is impaired if the materials are not in good and usable condition. According to Ifidon and Ifidon (2008), an effective educational system requires information and if information is to be at the disposal of everybody, there must be library and information services; otherwise there cannot be good or efficient universities. This is because the quality of a university is measured largely by the quality of its library. This calls for proper equipment and conservation of information materials in the university libraries. The proper or effective conservation of library materials in the university libraries is dependent on the extent of awareness and adoption of UNESCO Conservation Guidelines by the university library Management and staff.

University libraries, in a bid to meet the set objectives of the universities, provide a wide range of library materials which could be print and non-print. Print materials could be books (textbooks), reference sources, serials, theses and dissertations and legal publications. Non-print materials are all information resources in machine readable format such as CD_ROMS, diskettes, flash drives, films, microfiche and allied accessories such as computer software and hardware (Iman, Adeyoyin, Jegede, Adesanya, 2008). In this study, the researcher will only concentrate on the print materials. Library materials could be acquired through direct purchase, gifts and exchanges, donations and bequeaths. The essence of university library

materials is to ensure that the right user gets the right information materials at the right time, at the right format, at the right place and at the user's convenience (Aina, 2004).

Furthermore, the right information materials are needed by Nigerian universities to perform the following main functions: Conservation of knowledge; pursuit, promotion and dissemination of knowledge through teaching; advancement of knowledge through research, pure, applied and development-oriented; provision of intellectual leadership; development of human resources for meeting manpower needs and promotion of social and economic modernization (Aguolu and Aguolu, 2002). Thus, information is a vital tool in any organization and the library has a great role to play in the provision of the right information in the right format to the right user and at the right time. Therefore, for university library to play its role effectively, it must collect, organize, conserve, and provide access to knowledge and information. In fulfilling this objective, university libraries have to preserve valuable materials of recorded knowledge that can be passed down to succeeding generations. Libraries are an essential link in this communication between the past, present, and future. Whether the cultural records are contained in books or in electronic formats, University libraries should ensure that the records are preserved and made available for later use.

Over the years, university libraries in Nigeria have continued to experience deterioration of the status of their library materials owing to

adverse weather conditions. According to Kademani (2003), factors affecting the health of information materials are wars, fire, floods, earthquakes and communal or ethnic conflicts that have damaged the holdings of many university libraries, destroying forever much of the recorded history of human civilization. Library materials also fall victims to slow decay caused by acid content in paper, insect's infestation, improper storage or handling, excessive heat, high or low humidity and air pollution as recorded by Nwokedi and Nedosa (n.d). Nwokedi and Nedosa further explained that the more acidic a paper was, the more likely it would deteriorate fast. Therefore, comparatively, papers that have low acidic contents remain in good condition for a longer time before they deteriorate. This observation by Nwokedi and Nedosa corroborated the works of Ovowoh and Iwhiwhu (2010). When these conditions happen, vital information resources are lost with the implication that user's information needs may not be met and future use of such resources are permanently hampered. To ensure that university libraries remain relevant for future generations, they must ensure and engage in the Conservation of their collections.

Conservation, according to Edhebe (2004), is a field of knowledge concerned with the coordination and planning for practical application of the techniques of binding, restoration, paper chemistry and other materials technology as well as other knowledge pertinent to the preservation of resources. . Wreford (2015) stated that conservation ensures that our shared

heritage is cared for and protected for the benefit, use and enjoyment of the public today and for the generations to come. According to American Council of Learned Societies (ACLS, n.d), area of Conservation commences with the creation of text, extends to publication thence to acquisition and then storage in the library for access and use. This means conservation concerns with authors, publishers, librarians and readers. But librarians have more responsibility of preserving the library reading material which starts from acquisition. Library materials conservation is a fundamental responsibility by which university libraries ensures the continuity care, availability and authenticity of the library materials that it holds in trust for present and future generation. Lewis (2000) is of the opinion that without adequate protection, the materials that contain important historical information will deteriorate beyond their usefulness. As a result, vital information for the safety of humanity will not be available and accessible.

International Federation of Library Associations (IFLA, 2006) declared that the core activity of conservation is to ensure that significant library materials, published and unpublished, in all formats, will be preserved in accessible form for as long as possible. Similarly, Popoola (2003) defined conservation as policies and operations embarked upon by the managers of libraries and with the aim of increasing the life span of their information resources by preventing damage or remedying deterioration. He further explained that it may also be seen as direct physical intervention arresting or

slowing down deterioration of library resources. The term conservation is two folded i.e. preservation and restoration.

Preservation has to do with all the steps taken in the acquisition, organization and distribution of resources to prevent and stop deterioration of library materials (Odogwu, 2008). Preservation applied to safeguard the library information resources from decay and deterioration. It is the process in which all actions are taken to check and retard deterioration of information resources in the library. According to Isa (2003) no librarian of today can shy away from the fact that information world stands the imminent risk of losing so much of its valuable written heritage through the over increasing deterioration of information resources. Preservation is a preventive measure that consists of indirect action to retard deterioration and prevent damage, creating conditions optimal for the longevity of materials. International Council of Museums-Committee for conservation (ICOM-CC, 2008) described preservation as all measures and actions aimed at avoiding and minimizing future deterioration or loss. They are carried out within the content or on the surroundings of an item, but more often a group of items, whatever their age and condition. The measures and actions are indirect; that is, they do not interfere with the materials and structures of the items. They do not modify their appearance. Examples of preservation activities are appropriate measures and actions for registration, storage, handling, packing and transportation, security, environmental management (light, humidity,

pollution and pest control), emergency planning, education of staff, public awareness and legal compliance.

The necessity of preservation in the university library cannot be underestimated. Mnjama (2010) opined that the documentary heritage which the university library houses provides the raw materials that allow us to understand, explain, order, and enjoy the visible and invisible world. Access to the past information resources enable us to understand and locate ourselves in the present and give us the opportunity to inform the future. In preserving our shared past, we are preserving the collective memory for future generations. In university libraries, if past information resources were being preserved, it will, of course be of great benefits for new generations in having duplicate knowledge of what happened in the past. This is because libraries contain an irreplaceable accumulation of human knowledge and experience, nevertheless, it would be a waste of resources if after institutions such as university libraries have devoted considerable sums of money in acquiring and processing information materials and these valuable resources remain in accessible to scholars and other bonafide users especially lecturers, students, and community. The importance of preserving library information materials was summed up by cloonan (2001) when he stated that preservation allows for the continuity of the past, with the present and the future. The aim of preservation is to provide long term access to the physical and intellectual contents of the library.

Restoration on the other hand, is the act of returning the deteriorated item to its original or near original conditions. Restoration according to International Council of Museums-Committee for Conservation (ICOM-CC, 2008) means all actions directly applied to a single and stable item aimed at facilitating its appreciation, understanding and use. The actions are only carried out when the item has lost part of its significance or functions through past alteration and deterioration. They are based on respect for the original material. Most often, such actions modify the appearance of the item. Example of restoration includes treatment, replacement and reformatting. Restoration is the specialized repair by conservators of damaged objects that aims to restore objects to a known or assumed condition and appearance. It does not attempt to control deterioration of objects. It utilizes such practices as comprehensive cleaning and refinishing, and replacement of broken parts with non original materials. Restoration treatments are not necessarily reversible. Restoration comprises remedial conservation which is all actions directly applied to an item or a group of items aimed at arresting current damaging processes or reinforcing their structure. These actions sometimes modify the appearance of the item. Examples of remedial conservation are disinfestations of materials, de-acidification of paper, dehydration of wet materials, and replacement of lost materials.

To assist university libraries control continued deterioration of library materials, UNESCO in 2000, provided conservation guidelines that will

tremendously mitigate damage to information resources. The UNESCO Conservation Guidelines covers both preservation and restoration practices. The essence of the UNESCO Conservation Guidelines is to provide a broad framework for University libraries for conservation of their mainly traditional (print) library materials so that their longevity could be assured. In the area of preservation, the Guideline stipulates good housekeeping practices in terms of cleaning, removal of deleterious components, flattening, and packing. Handling, inspection, and pest control, treatment of premises, treatment of affected documents, bindings and shelving, in the area of restoration, the Guidelines provides for basic principles, fumigation, deacidification, lamination, and encapsulation. For this UNESCO Conservation Guidelines to effectively be utilized in the university libraries, the university library managers and staff must be aware of and also adopts the guidelines.

Library management according to Parvez and Mohd (2009) mean personnel managing both human and material resources in the library. They are the decision making body in the library. Library Management comprises unit heads ranging from senior librarians, deputy university librarians, the university librarians and chief library officers. They are in charge of the operations and services of the university libraries. Though they are library staff but they are at the managerial level otherwise known as library management team

Library staff consists of professionals, paraprofessionals and non-professionals in the library. Professional staff is professional person(s) trained in library science and engaged in library services. Encyclopedia wikipedia describes professional librarians as those who work professionally in a library, and may hold a degree in librarianship know either as library science or library and information science. To be a professional librarian, one must complete training which is accredited by a professional body. To many librarians this training takes the form of a Bachelor of library and information Science (BLIS) or master's degree (MIS).

According to James (2011), the term paraprofessional designates library positions with entrance-level requirements that are distinctly different from those of librarians. They commonly perform their duties with some supervision by a librarian and are classified as library officers. A paraprofessional is a trained worker who is not a member of a profession but who assists a professional. Non-professionals are library assistants, associates, technicians, and technical assistants, catalog assistant, periodicals supervisor, and reference assistant among others that are employed with West African Examination Council (WAEC) or first school leaving certificate. They are known as junior staff in the library.

Finally, it is imperative that library materials conservation practices should be properly and adequately developed and maintained not only to prevent loss and damage but to provide library safe for quality service

delivery to library users both now and in the future. The researcher has observed that the library managers and staff seems to be carrying out their conservation practices in non-uniform ways that could be said to be patterned in a particular way not based on the UNESCO Conservation Guidelines. This has not helped to improve the conservation of the library materials in their library as the practices by these library personnel seem confusing. The researcher is therefore motivated by this observation to study the extent of awareness and adoption of UNESCO Conservation Guidelines by University Library managers and staff in South-East, Nigeria. The UNESCO Conservation Guidelines are the blue print for sound conservation of library materials.

Statement of the Problem

University libraries in Nigeria are generally believed to practice conservation of library materials which aims to ensure the longevity and safety of information resources. In spite of their involvement in conservation practices, there are still observable cases of damage in most of the university libraries with the implication that vital resources are lost and meeting the information needs of the users often impaired.

More worrisome is the fact that available researches from literature on Conservation practices show that almost all the researches focused only on conservation practices as found in the university libraries without relating

them to the UNESCO Conservation Guidelines. Consequently, there is hardly any empirical evidence to show whether the conservation practices going on among university library management and staff in South East Nigeria follow UNESCO Conservation Guidelines.

UNESCO in 2000 provided a conservation Guidelines that must be followed strictly before conservation of library materials will be effective and efficient to ensure the longevity and safety of library materials. The guidelines cover both the preservation and restoration practices. In the area of preservation practices, the guidelines provided good housekeeping practices and this involves cleaning. The preservation guideline stated that to ensure the protection of the collections against particulate pollutants, a regular and sustained programme of cleaning should be maintained, undertaken with care and under supervision. It is important to provide appropriate materials and equipment which remove rather than redistribute dirt and dust. Cleaning cloths to which particulates adhere rather than dusters which merely spread them around in different places should be used to clean library fittings. Floors should be vacuum cleaner (not swept) and damp-mopped once a week. But in our libraries today dusters are used in cleaning and the floor are swept rather than vacuum cleaning as stated in the guideline thereby causing more harm than good to our materials. More so, the library cleaners are not supervised efficiently and some hidden and obscure places have become home for pest, insects and rodents which attacks our library materials. Food and drink

should never be brought into storage areas (or, ideally, into the archives and libraries) stated the guideline but library staff buy and eat food and even share fish inside and around library premises.

In restoration guidelines, it is stipulated that fumigation is the full-time job of one sub-professional with special training in the health and safety aspects but library managers always invites an outsider whose qualification is unknown to them to fumigate the library and at the end nothing will happen. Instead staff will be affected and injured by the chemical while the rodents and insects will be on the increase affecting and deteriorating the lifespan of library materials. This is just a few among many instances that prompted this research topic. However, it is imperative that library materials conservation practices be properly and adequately developed and maintained not only to prevent loss and damage but to provide library safe for quality service delivery to library users both now and in the future. The researcher has observed that the library management and staff seem to be carrying out their conservation practices in different ways that are not based on the UNESCO Conservation Guidelines. This has not helped to improve the conservation of the library materials in university library as the practices by these library personnel seem confusing, there is therefore, a gap in relation to knowing the extent to which university library management and staff are aware of and adopt the UNESCO Conservation Guidelines in South –East, Nigeria. Based on the above observations, the researcher is therefore motivated to study the

extent of awareness and adoption of UNESCO Conservation Guidelines by university library management and staff in the South-East, Nigeria. The UNESCO Conservation Guidelines are the blue print for sound conservation of library materials.

Purpose of the Study

The main purpose of this study was to find out the extent of awareness and adoption of UNESCO Conservation Guidelines by university library management and staff of the South-East Nigeria. Specifically, the study sought to find out the extent to which the university:

1.   Library management is aware of the UNESCO Conservation Guidelines preservation practices.

2.   Library management is aware of the UNESCO Conservation Guidelines restoration practices.

3.   Library staff are aware of the UNESCO Conservation Guidelines preservation practices.

4.   Library staff are aware of the UNESCO Conservation Guidelines restoration practices.

5.   Library management adopts the UNESCO Conservation Guidelines preservation practices.

6.   Library management adopts the UNESCO Conservation Guidelines restoration practices.

7.   Library staff adopts the UNESCO Conservation Guidelines preservation practices

8.   Library staff adopts the UNESCO Conservation Guidelines restoration practices.

Significance of the Study

The findings from this study would be significant to the following groups: University library Management and library staff, university management, UNESCO and other researchers interested in conservation of library materials.

The findings of this study will help the university library management and staff to understand and appreciate the importance of UNESCO Conservation Guidelines on effective preservation and restoration of library materials. It will help them understand that the Guidelines are there to assist them and not to harass them. It will also make them know that the way they handle conservation practices can make or mar the library materials and services. More so, it will also be an important component of their decision-making so that areas of their conservation practices that need to be strengthened may be identified and appropriate actions be taken thereto. In the long run, it will provide the university libraries an opportunity to draw up strategic direction they require in order to initiate and implement any preservation measures for the protection of their library materials in line with

UNESCO Conservation Guidelines. In addition, it will assist the university libraries to understand the physical needs of records as regards to its conservation for posterity.

This study will help the university management to have understanding about the importance of UNESCO Conservation Guidelines on preservation and restoration of library materials of the university. And this understanding will help them realize that the extent of awareness and adoption of UNESCO Conservation Guidelines towards preservation and restoration practices in the library can make or mar the School activities. Since Library is the bedrock of the institutions. Furthermore, the understanding will help them support and approve funds for seminars and conferences related to UNESCO Conservation Guidelines.

The findings will also be an eye opener to UNESCO because it will enable the organization to appreciate the workability or otherwise of its conservation Guidelines in Nigeria so that areas that seem hard to implement may be fine-tuned and streamlined.

Finally, library and information professionals, researchers and other scholars interested in Conservation practices will benefit from the study, because the findings will serve as the baseline data for further research and add to the existing literature in the area. Consequently, this study will add to the existing body of knowledge on Conservation.

Scope of the Study

This study dwelt on the extents of awareness and adoption of UNESCO Conservation Guidelines by university library management and staff in South- East, Nigeria. The UNESCO Conservation guidelines hinges on preservation and restoration which are the two aspects of conservation. It covers only print materials. The research was limited to public Universities whether owned by state or federal government. The universities in South-East geopolitical zones are University of Nigeria (UNN) Nsukka, Enugu state University of Technology (ESUT), Nnamdi Azikiwe University Awka, (NAU), Abia state University Uturu (ABSU), Michael Okpara University of Agriculture Umudike (MOUAU), Imo State University Owerri (IMSU), Federal University of Technology Owerri (FUTO), Ebony State University(EBSU), Anambra State University(ANSU), Federal University Alike Ikwo (FUNAI).

Research Questions

The following research questions guided the study:

1.   To what extent are the university Library management aware of the UNESCO Conservation Guidelines preservation practices?.

2.   To what extent are the university library management aware of the UNESCO Conservation Guidelines restoration practices?

3.   To what extent are the university library staff aware of the UNESCO Conservation Guidelines preservation practices?

4.   To what extent are the university library staff aware of the UNESCO Conservation Guidelines restoration practices?

5.   To what extent does the university library management adopt the UNESCO Conservation Guidelines preservation practices?

6.   To what extent does the university library management adopt the UNESCO Conservation Guidelines restoration practices?

7.   To what extent does the university library staff adopt the UNESCO Conservation Guidelines preservation practices?

8.   To what extent does the university library staff adopt the UNESCO Conservation Guidelines restoration practices?

Testing the null Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

Null hypothesis 1

There is no significant difference on the extent the library management is aware of UNESCO Conservation Guidelines preservation practices due to status of their University.

Null Hypothesis 2

There is no significant difference in the extent the library management is aware of the UNESCO Conservation Guidelines restoration practices due to the status of their University.

Null Hypothesis 3

There is no significant difference on the extent the university library staff are aware of the UNESCO Conservation Guidelines preservation practices due to the status of their University

Null Hypothesis 4

There is no significant difference on the extent the university library staff are aware of the UNESCO Conservation Guidelines restoration practices due to the status of their University

Null Hypothesis 5

There is no significant difference on the extent the university library management adopt UNESCO Conservation Guidelines preservation practices due to the status of their University.

Null Hypothesis 6

There is no significant difference on the extent the university library management adopt the UNESCO Conservation Guidelines restoration practices due to the status of their University.

Null Hypothesis 7

There is no significant difference on the extent the university library staff adopt the UNESCO Conservation Guidelines preservation practices due to the status of their University.

Null Hypothesis 8

There is no significant difference on the extent the university library staff adopt the UNESCO Conservation Guidelines restoration practices due to the status of their University.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Conceptual Framework

Conservation

UNESCO Conservation Guidelines

Theoretical Framework

Operational Conservation Theory

Theoretical Studies.

Awareness and adoption of the UNESCO Conservation Guidelines preservation practices by university library management and staff.

Good Housekeeping (Cleaning)

Shelving

Handling of Library Materials

Flattening

Pest Control

Provision of Functional Air Conditioners

Provision of adequate Security to Prevent theft, Mutilation and

Vandalism

Awareness and adoption of the UNESCO Conservation Guidelines restoration practices by university library management and staff.

Lamination

Photocopying

Encapsulation

Fumigation

Binding

Deacidification

Empirical Studies

Summary of Related Literature

Conceptual Framework

Conservation

To a layman, conservation of library materials is the protection of books and other materials in the library to prevent them from being lost or wasted. It is a careful protection of books or other materials in the library; especially planned management of the materials to prevent them from loss or damage so as to prolong their lifespan.

The term conservation has been defined by Nwalo (2003) as the careful handling of resources, dusting of resources and shelves, treatment of resources and the identification and gathering of resources needing restoration or fortification. Nwogwugwu (2001) expressed that it is important to point out that the term conservation is however believed to be wider in scope, highly technical and is concerned with such complicated issues as the chemistry of materials ; the monitoring of environmental system and the design of the document structure. IFLA Principles for the Care and Handling of Library materials (2010) also defined Conservation as specific practices

adopted to slow down deterioration and prolong the lifespan of an object by directly intervening in its physical or chemical make-up. It is the act of prolonging the life expectancy of damaged or undamaged elements of cultural Property such as paper. According to Edhebe (2004) conservation is a field of knowledge concerned with the coordination and planning for practical application of the techniques of binding, restoration, paper chemistry and other materials technology as well as other knowledge pertinent to the preservation of resources. Conservation is a term, which embraces three closely related ideas, preservation, protection and maintenance.

According to American Council of Learned Societies (ACLS, n.d) an area of Conservation commences with the creation of text, extends to publication thence to acquisition and then storage in the library for access and use. This means conservation concerns with authors, publishers, librarians and readers. But librarians have more responsibility of preserving the library reading material. The term conservation is two folded i.e. preservation and restoration.

According to Reitz (2004), conservation implies the use of physical or chemical methods to ensure the survival of manuscripts, books, and other documents. For example, the storage of materials under controlled environmental conditions or the treatment of mildew-infected paper with a chemical mould inhibitor. In a more general sense, according to Rietz (2004),

any measures taken to protect library collections from damage or deterioration, including examination, documentation, treatment and preventive care supported by research is referred to as conservation. Opinions of some workers (ICOM-CC, 2008) are that conservation is all measures and actions aimed at safeguarding tangible cultural heritage while ensuring its accessibility to present and future generations. Conservation is complex and demands the collaboration of relevant qualified professionals. In particular, any project involving direct actions on the library information materials requires a conservator or a restorer.

Adebayo (2004) asserted that proper conservation or risk management should involve the collaboration between scholars and librarians who can make judgments about the physical risk that threaten collections. This will go a long way in ensuring the survival into the future the legacy we have intended. Hence, Adebayo (2004) claimed that the goal of any conservation is to ensure long term, ready access to the information resources of an institution. Conservation involves prudent collection management. For example, sound techniques for binding materials such as periodicals and unbound monographs are important, because the way these materials are bound determines how long they will last and how easily the contents can be accessed. Without conservation, access becomes impossible and collections decay and disintegrate. Alegbeye (2002) defined conservation as specific practices taken to slow down deterioration and prolong the life of an object

by directly intervening in its physical or chemical make-up. Alegbeye further gives an example which include; the repair of damaged books, binding of loses documents, deacidification of paper, *et cetera*. That is why Conservation practices in line with UNESCO Conservation Guidelines are important in our University libraries. The role of a conservator involves the examination, preservation of library materials, sewing of any method that prove effective in keeping that property in as close to its original condition for as long as possible.

The sole aim of conservation is to ensure stabilization and protection of records against dangers and also correction of damaged wealth. The priority of placing materials in conservation is based on their rate of deterioration. The more rapidly decaying materials are given first importance than others. More so, library conservation aims to encourage the proper care and accessibility of research materials, to promote the use and development of guidelines and technical standard for conservation work. It aims to stabilize the condition of, and limit any further damage and deterioration to a given object while working ethically to provide the best treatment possible. Thus the main aim of conservation is to keep library materials in their original format for as long as possible. Library materials can be preserved through remedial treatment of individual materials (flattening book and paper repair, binding), treatment of an entire collection (mass de-acidification,

fumigation), and stabilization (surface cleaning, new containers, protective enclosures).

Conservation methods and materials should not damage library materials. Thus, there is the need for trained personnel in conservation that is a conservators found in www.lib.cornell.edu./index.htm. According to AIC Director (2003), conservator is a professional whose primary occupation is the practice of conservation and who, through specialized education, knowledge, training and experience formulates and implements all the activities of conservation in accordance with an ethical code such as the UNESCO codes of ethics and guidelines for practice. Furthermore, Conservators combine in-depth knowledge of science and art with extensive practical experience to care for objects of cultural and historic value. Many paper or book conservators are members of a professional body, such as the American Institute for Conservation (AIC) or the Guild of Book workers or the Archives and Records Association. Some condition problems will require more cautious treatment and/or immediate attention of a conservator.

Conservation consists of preservation and restoration. Asiamah (2008), stated that the consequence of people dying with rich store of knowledge, taught mankind the essence of documenting information and preserving it on particular medium. Ever since, information had to be preserved through print and non-print media. The longer the information is

preserved the better it is for posterity. Deterioration of library materials is a challenge in most University libraries. According to Reed-Scott (2000), libraries currently face the intellectual problems of determining what should be preserved and what should deteriorate. Preservation problems are pushing collection managers into a more activist role, in which they must make crucial preservation decisions thus growing awareness in the past decade of the magnitude of preservation problems which has resulted in a steady increase of preservation programs within research, academic, and public libraries. Efforts must be made by librarians to ensure that these valuable resources are well preserved for future generations to avoid extinction.

Aina (2007) defined preservation as a means of taking care of library materials to avoid deterioration. While the Institute of Museum and Library Services (2009) defined preservation as a process that effectively extends the life or useful life of a living or non living material, the individual items or entities included in a collection, or structure, building or site by reducing the likelihood or speed of deterioration. Preservation according to Crespo and Vinasi (2011), included all methods designed to avoid the deterioration of records (preventive or preservative methods); while restoration involves the direct treatment of items that have suffered damage or deterioration (curative measures and restoration). Jordan (2003) described preservation as an umbrella term for an array of activities; principles, practices, and organizations that ensure the usability, longevity, and accessibility of

recorded knowledge. Madu (2004) is of the opinion that libraries help to preserve for those who follow us, our thoughts intellectual and artistic creations and man's historic records. According to Wise (2003) therefore all the efforts may come to naught if materials are lost as a result of problems of preservation. It is necessary, therefore that the library should do everything they could reasonably do to avoid or lessen the impact of disaster, by planning ahead of time since it would be worth the time, effort and resources.

Preservation according to Meyer (2009) broadly defines, encompasses the managerial and practical activities that libraries employ to stabilize, repair, or reformat collection materials. It includes provision of proper storage and monitoring and control of the environment. Preservation consists of non-intrusive actions to slow or stop deterioration and to prevent damage. It provides the most effective use of resources for preservation of the material. The application of preservation measures will take precedence over restoration treatment.

According to United Kingdom institute for Conservation (Ukic, 2008), preservation embraces all actions to prevent materials of cultural properties from damaging them by creating optimal conditions of storing, exhibiting, using and transportation. Library materials can be preserved successfully by slowing the process of deterioration and by preventing incidental and catastrophic damage. Reed-Scott, (2000) argues that "although the process of preservation is frequently seen to be retarding or reversing the effects of time,

in fact much of the preservation involves forecasting how something will age and taking steps to mitigate the aging".

According to Association of Research Libraries, it is possible to identify three primary causal factors that commonly characterize preservation problems in libraries. The first, which may be viewed as an internal factor, relates to the characteristics of the materials themselves, whose physical and chemical properties are inherently unstable. Many library materials have organic components such as paper, cloth, and adhesives. These organics have a natural aging process which will result in a gradual weakening of the molecular bonds over time eventually manifesting itself as physical deterioration of the book or other library materials. Another primary factor is the physical environment of the library where the materials are being housed. Environmental influences which promote the deterioration of paper and other materials include high temperature, extremes in relative humidity, unfiltered light, pollution, and biological agents. The latter group includes fungi (mold and mildew), insects, and rodents. The third primary causal factor relates to the nature of handling and use of library materials. People themselves pose the greatest threat to the longevity of these materials because they are responsible for binding or packaging techniques, shelving procedures, processing and circulation practices, and the way library staff and patrons handle the materials. While Madu and Adeniran (2005) opined that different materials have been used as writing surfaces through ages with the exception

of stones and metals and all these are susceptible to deteriorating factors. They further highlight that clay is to worms, papyrus to insects and moisture, bark, wood and palm leaves to termites and other insects, leather and linen to rat and clamp and finally paper to light, acidity, moisture, insects etc.

Library materials can also experience deterioration due to climatic factors, internal degradation, catastrophes, improper handling, and poorly designed storage areas, use of untested materials which have done more harms than good to documents and to crown it all lack of trained staff. This is known as advanced state of deterioration as express by Madu and Adeniran (2005).

Material deterioration is as old as library itself as earlier stated above, it started when writing started, to more specific it started with the invention of books therefore it is not new. According to Madu and Adeniran (2005), everything in library collections is deteriorating today, was deteriorating yesterday and will continue to deteriorate tomorrow although wrought to retard the process. There are a lot of conditions that can make library materials to deteriorate. It is possible for two copies of a book to deteriorate at different times; this could depend on the handling, storage condition. No wonder an Emperor as early as 12th century declared the prohibition of the use of paper because he had a phobia that "it was too perishable".

Akussah (2006) stated that paper documents, over time, get discoloured as a result of the interplay of several factors. He further agreed that the reaction is caused if lignin is found to be present in the paper. Discoloration changes papers from its original colour to brown or yellow and this reduces the legibility and makes reproduction difficult. Sun emits ultraviolet and blue violet rays which cause paper deterioration. Traditional archivists and librarians believe that preservation activities ensure everlasting life for materials.

Akussah (2006) stated that materials, however well cared for, cannot last forever, due to the fact that the basic constituents of these materials are organic and are inclined to decay and deteriorate. According to Altenhöner (2013), Preservation can be defined as the strategic task of curating physical objects in a way which ensures access to objects for a longer time. More traditionally, preservation can be defined as the physical preservation of single objects or whole materials. This means in practice the stabilization of physical material or the slowdown of natural decay processes of distinctive objects. Taking a broader perspective, curation also includes tasks such as the prevention of negative influences like temperature fluctuations, damage from water and so on.

American Institute for Conservation (AIC,2008) defined it as follows: " preservation is the mitigation of deterioration and damage to cultural property through the formulation and implementation of policies

and procedures for the following, appropriate environmental conditions; handling and maintenance procedures for storage, exhibition, packaging, transport and use; integrated pest management; emergency preparedness and response; and reformatting/duplication. In the author's opinion, AIC employ that staff of library must be informed not only about the value of works of art but also about their fragility. According to European Confederation of Conservator-Restorers Organization (ECCO, 2002) professional guidelines "preservative conservation consists of indirect action to retard deteriorations optimal for the preservation of cultural heritage as far as is compatible, current handling, transport, use, storage and display. It may also involve issues of the production of facsimiles for the purpose of preserving the original". Conservation professionals should recognize its importance as the most effective method in promoting the long-term preservation of Library materials.

Preservation aims to increase the longevity of library materials through careful storage and use, more so it aims to assure long-term, uninterrupted access to the intellectual content of the Library. It is important because there is not enough time or money to give each and every document individual treatment; and because poor storage can allow mould, insects, rodents, structural defects and chemical ageing to destroy library materials. Their security against fire, flood, theft and vandalism also has to be ensured. It utilizes the scientific and aesthetic principles of conservation to eliminate or

modify conditions that foster deterioration, and includes any measures that prevent damage or reduce the potential for damage or loss. It incorporates all actions and procedures that aim to prolong the life of an object by eliminating or slowing natural deterioration as far as is possible. It concerns the stabilization of entire materials through effective environmental regulation, and when effectively applied should minimize the need for individual objects oriented.

Preservation actions include planning, and prevention action to improve the environment or otherwise reduce risk of damage or loss. Information sources can be in print or in electronic version, and they are vital and delicate. The way they are handled can affect the life span of the records contained in them. These records must be preserved for future purposes. Information sources on the other hand are materials consulted for knowledge about a topic, a theme, an event, a date, a number, a place or even a ward (Aina, 2002).

Restoration according to Canadian Conservation Institute (2002*) is* the specialized repair by conservators of damaged objects that aims to restore objects to a known or assumed condition and appearance. It does not attempt to control deterioration of objects. It utilizes such practices as comprehensive cleaning and refinishing, and replacement of broken parts with non-original materials. Panage, and Bonde,(2013) stated that restoration denotes those techniques and judgments used by technical staff engaged in the making

good of library   material damaged by time, use and other factors .It is a technical area and needs special skills, which may not be possible for every librarian to possess it.

Restoration treatments are not necessarily reversible outside the library field; restoration survives as a specialized field that provides skilled repair to valuable collections in current use. Restoration is all actions directly applied to a single and stable item aimed at facilitating its appreciation, understanding and use. These actions are only carried out when the item has lost part of its significance or function through past alteration or deterioration. They are based on respect for the original material. Most often such action modifies the appearance of the item. Examples of restoration are retouching a painting, reassembling a broken sculpture, reshaping a basket, filling losses on a glass vessel.

Restoration aims to return the book to its original appearance for instance original parts of the binding are used if they are intact; damaged parts may be cut away and new material of similar type and appearance substituted. The new material is selected, coloured, and textured to look like the old; decorative elements that have been lost are reconstructed. According to the University of Michigan there are three basic requirements which any good restoration process should meet. They are legibility, permanency, and durability. Each will be described briefly.

Legibility-The readability of the restored item should not be reduced appreciably.

Permanency-In order to ensure permanency, the impurities which caused deterioration of the item should be removed or made inert. The materials used to strengthen the sheet should be chemically pure and stable and should be resistant to the harmful action of certain agents present under normal storage condition and usage. In addition, the process used should not reduce the permanency of the item treated.

Durability-After restoration, items which will get much use should have both good resistance to tearing and folding endurance. Seldom used items, such as exhibit pieces, may have a lower requirement. All of these qualities are needed and one of them should not be overemphasized to the extent that the others will suffer materially. Many restoration processes have proved to be unsatisfactory because their product did not meet all three of the requirements.

UNESCO CONSERVATION GUIDELINES

According to Bokova (2009) The United Nations Educational, Scientific and Cultural Organization (UNESCO) were born on 16 November 1945. UNESCO's mission is to contribute to the building of a culture of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, Communication and

information. In order to assist in meeting the needs of member states, especially developing countries in the specialized areas of Conservation, UNESCO with IFLA and ICA (2000) developed guidelines for the conservation of library materials. It is true that there are several Conservation Guidelines like American library Association Conservation Guidelines (ALA), IFLA Conservation Guidelines and so on. However, I have tried to use UNESCO Conservation Guidelines as my benchmark because it is all encompassing.The purpose of this Guideline is to provide archivists and Librarians, especially those concerned with planning, commissioning and managing conservation services, with a summary of guidelines which they can apply in selecting and introducing those which are most appropriate to their own situations. Based on this study, the guidelines to be used for this work will be in two parts: preservation guidelines and Restoration guidelines. In the area of preservation, the Guideline stipulates Good Housekeeping practices in terms of Cleaning and dusting, removal of deleterious components, Flattening, Packing. Handling, Inspection, and Pest Control practices such as Treatment of premises and Treatment of affected documents. In the area of restoration, the Guidelines provides for basic principles for restoration and repair, fumigation, Deacidification, Lamination, Encapsulation, Bindings and shelving. The guideline for conservation is attached as appendix A.

Theoretical Frame Work

Operational Conservation Theory

Conservation Theory is defined as a body of systematic thought which provides guidance to conservators, to curators, to museum staff, to responsible administrators and funding bodies - even to the general public, concerning how to deal with cultural heritage as it is expressed in physical form and shape (Brock, 2010). The theory was propounded by George Brock in 1987.The basis for Operational Conservation Theory is that all objects or artifacts which surround us contain information of various kinds. (Brock, 1997). Obviously these artifacts like drawing, painting or photograph were not all made just to provide information, but many - perhaps most - were made to have a functional useful purpose. When their function has worn out they may be repaired, thereby regaining their function, but this changes the information. Or they may be retained in their worn out condition - this retains some information, and the *function* is now a different one, namely that of library materials or collector's item. One of the important functions is that of a symbol - the artifact symbolizes something which at some stage is or has been important to humans.

Some artifacts have the retaining of information as their function. This is the large group that the present writer has proposed to term representative artifacts or agents (figurative or nonfigurative images such as in drawings and

paintings, photography, and their printed representation as well as sound recordings, films, video), in which there is a primary information and secondary information. The secondary information may be very important indeed for evaluating the context of the artifact. It appears that irrespective of the function, the key term of the present discussion is *information*, and we must get a grasp of this concept.

Information is all that the individual may extract from the artifact or collections, using any means available to him. This means that the extraction may indeed be apparatus-assisted. It should be noted that some extraction may turn out to be destructive. One could say that it is the individual who defines what information to him is (and hence the *relevance* of a particular artifact, but the individual may form part of a group which agrees on this).

An example of information structure to acquaint us with the principle of information, let us look at two examples relating to *information* of an ephemeral nature which can definitely both be described and preserved,

a)   A pile of index cards found in a particular but not very "logical" order (however, this was the order in the drawer it was originally in

b)   A book with many loose paper strips as bookmarks.

In case a), what happens if the pile is structured, such as by sorting or indexing? Well, to the extent that the cards refer to a collection of e.g. books

which are all pre-sent, these books may now be retrieved according to the viewpoint of the present indexer. Any information as to preferences, which might have been the former system, will be lost. However, the original order might have been preserved and the access to the books could have been obtained in a different way, without the original index cards, or a list of the original order of the cards could have been pre-pared. This means that information need not be lost, and that a full analysis of the frame of reference of the original creator of the card file may be made at any time. In case b), what happens if the paper strips are simply removed? Good archiving practice would require the strips to be kept in a separate cover with a reference number, but the information given by ordering will be completely destroyed. Again, both preserving the item as found and noting the spreads indicated by the strips will preserve the information. Preservation of the complete item will mean one of several actions: maintaining the book closed (but in this way the page numbers cannot be seen), providing some means of releasable attaching the strips to the pages (but then readable matter must not be covered) or documenting the book and strips and marking the strips with page numbers. By the same token, restoration would mean putting the strips back in their respective places and seeing to it that the slightly discolored parts of the strips are placed precisely at the edges of the pages. Therefore, proper conservation of materials is needed for both present and future use. Most of these researchers that have studied the operational conservation

theory focused on need to preserve information content of the collections in developing countries.

Reviews of Theoretical Studies

Awareness and adoption of the UNESCO Conservation Guidelines preservation Practices by university library management and staff.

The Preservation practices are measures or techniques applied to retard deterioration and extend the useful life of library materials to ensure their continued availability and use. The preservation measures or practices are as follows:

Good Housekeeping (Cleaning)

According to Cornell University Library (2005),Good housekeeping for a library materials means keeping the materials and surrounding areas clean, educating staff and users on how to handle research materials, monitoring handling practices, and how users conduct themselves on library premises (and monitoring them), and housing and shelving materials appropriately. Smoking, eating, and drinking have no place in any area where materials are stored or used. Smoking not only fouls the air; it also leaves tar and nicotine deposits that degrade paper artifacts. Food and drink attract insects and rodents, leave residues that cause surface contamination, and pose a direct threat to research materials and equipment through spillage. Anasi (2010) stated that the practice of good housekeeping is probably the most simple and inexpensive method of preventive conservation for any type of

material in the library. Common sense and good housekeeping can add years to your library materials. Books should be removed from shelves periodically. At this time, inspect the books for dust or evidence of pests. If books are dusty, dust with a dry, clean brush in a ventilated area or outdoors. Shelves should be dusted with a magnetic wiping cloth so the dust is absorbed and not simply rearranged on the shelves. If you use your vacuum cleaner, vacuum with the soft brush attachment and change the bag frequently. Vacuuming is the best way to clean library materials because it is least likely to introduce dust back into the environment. When vacuuming, hold the book firmly closed and vacuum along the top, from spine to fore-edge and bottom edge of the book.

According to Lewis (2000), it is vitally important that an overall policy of cleaning and tidying is maintained. It is essential that clear instruction be given to the staff, banning eating and drinking in the repository areas. All areas of the storage facility must be regularly cleaned and a timetable of expected work compiled for the cleaners. It is ideal if a supervisor is provided by the library, backed-up by a competent member of staff who is available to monitor standards and performance. The effective good housekeeping will be possible if University libraries should train the library assistants and attendants on how to clean the library materials according to UNESCO Conservation Guidelines without damaging the materials. In

general, the cleaning and repair of paper documents and books should be left to a professional conservator.

The Procedure for cleaning books according to Cornell University (2015) is as follows:

Keep books firmly closed while cleaning them, and use magnetic cloths or vacuums to prevent dirt from slipping down between the leaves.

Remove books from the shelf in order, placing them on a cart with a bookend for support; then clean the shelf.

Clean each book starting with the top, which tends to be dirtiest, and then wiping or vacuuming the rest of the book.

Wipe or brush away from the spine to avoid pushing dirt into the end cap, or down the spine of the binding.

Work on one shelf at a time, moving from top to bottom.

Return books to the shelf in order, This is retrieved from

https://www.library.cornell.edu/preservation/librarypreservation/mee/management/housekeeping.

The cleanliness of storage areas is especially important, because dirt and grime damage materials and provide nutrients that promote mold and attract insects and rodents. If windows must be kept open for air circulation, the window openings must be covered by fine insect screening. Screens not only keep out bats, birds, and insects; they also slightly reduce the amount of

dust blowing through the windows. The screens should be removable so that they can be thoroughly vacuumed and washed on a regular basis.

All areas of the library should be cleaned regularly. Setting up a cleaning schedule for public spaces and storage areas may be helpful. Housekeeping manual for staff can detail procedures and special instructions for caring for the collections. Storage areas, counters, and tabletops should be cleaned often to prevent the accumulation of dirt. Floors should be vacuumed and damp-mopped at least every 48 hours, and carpets vacuumed at least once a day. Damp mopping, rather than wet mopping, reduces the risk of raising the humidity in confined areas. It also helps prevent books on lower shelves from being splashed by water and other cleaning materials.

Cleaning is important because the library materials need to be cleaned regularly to remove accumulations of dust and dirt and to monitor their condition. This involves the use of vacuuming and dusting. Cleaning the building should involve the entire surroundings and maintenance of key building elements and systems such as roof building that is clean and neat will promote respect.

In a study of Adcock and Verlamoff (2005) to ensure the protection of the collections against particulate pollutants, a regular and sustained programme of cleaning should be maintained, undertaken with care and under supervision .Clean surroundings also discourage fungi, insects, and

pests .The cleaning programme should include the examination of Library materials not only to provide early warning of biological or chemical damage but also to observe conditions throughout the area.

Cleaning the floors of the storage accommodation and book stacks may be left to non specialized staff under instruction to respect the collections and not to touch library materials or shelves. Library materials should only be cleaned by properly trained Library staff. According to Public Record Office of Northern Ireland (2007) library records can be difficult to clean, either due to the delicate condition of the substrate or the fragility of inks and pigments. Consequently, care must be taken when carrying out this treatment to avoid further damage or loss of information. This implies that though university Libraries involves in cleaning as a preservation practices yet library materials still deteriorates and damages.

Shelving

North east Document Conservation Center Preservation Leaflets Disaster Assistance (2012) opined that storage and handling methods should have a direct impact on the useful life of Library materials and the accessibility of information. Damage to library materials can be avoided by preventing overcrowded, careless, or haphazard storage conditions. Chemically unstable and improperly fitting shelving and storage enclosures accelerate the deterioration of materials they are intended to protect. Normal

use causes wear, but inexpert and rough handling can quickly lead to extensive damage to library materials requiring expensive repair or replacement. The longevity of library materials can be extended significantly by putting into practice the guidelines discussed here.

It is recommended that metal shelves be used in storage areas. Wooden shelves are often treated with varnishes that cause damage to organic materials and wood is a food source for many insects. Metal shelving should aspire to a general standard of design and rigidity of construction. The paint should be non-toxic and applied by a powder-coating method. It must be placed away from outside walls to aid ventilation and the bottom shelf must be at least 15cm above floor level to protect against flooding. This safeguard gives the salvage teams time and is an easy standard to establish during the erection of shelving.

Jenkinson (2003) suggested that the shelves and containers also conform to the exigencies of good storage that is resistant to dirt, dampness, fire, and microorganisms. Proper choice of material and design of shelves and containers prevent the dangers to the documents. They may be arranged width wise along the length of the rooms. The shelf should be made of battens so that the airflow is maintained underneath the archival material kept on them. For long rolled documents, cantilever brackets built into the wall and provided with teak battens. These racks may be placed close together one above another, each taking one layer of rolled maps, etc., of any length up to

5. Jenkinson suggested that cleaning space must be provided on every floor keeping the document while the place is being cleaned.

Handling of Library Materials

Library materials are vital sources of information and as such they are made to be used, read and studied as supported by American Institute for Conservation of Historic and Artistic Works (AIC, 2012) that the purpose of most books is to be used and read. This requires that library materials should be accessible to users, thus subjecting them to handling. Cornell University Library (2005) asserted that Paper is remarkably resilient. It can last for centuries if housed and stored in benign conditions and handled with care. Beyond providing a good environment and sufficient circulation of air, a librarian needs to ensure that objects are handled properly and stored in protected forms and stable positions in clean, organized storage areas with appropriate shelving. When staff or users consult the text of a rare or unique item, they should use white cotton gloves, which help to prevent the transfer of the skin's natural oils onto the vulnerable leaves. Users should also use cotton gloves to handle non paper materials, such as microfilm, photographic prints, and negatives, touching only areas away from the images.

Mohammed (2006) stated that poor handling or rough handling of library materials however quickly leads to serious irreparable harm. Therefore, it is the job of the university libraries to advocate best practice

when handling and using collection items, within the Library and externally. The libraries should provide training for their staff and all users as enshrined in UNESCO Conservation Guidelines. American Institute for Conservation of Historic and Artistic Works, (2011) declared that Poor handling procedures can cause significant damage to books, resulting in restricted, delayed, or discontinued use, or requiring expensive treatments before the volume can be used again. The consequence of this poor handling and heavy use was that most libraries were left with a lot of damaged books and journals which were in need of conservation. Library staff and patrons should be made to realize that library materials need to be handled carefully and skillfully, not used or abused until they were worn out and then discarded and replaced, since replacement might not be possible. According to Northeastern Document Conservation Center(2012),Staff training for safe handling `practices is important for ensuring that materials will be preserved during processing and also when being used by the public. Users should be instructed in the careful handling of library materials in an initial orientation, as well as when formats change and require different handling practices.

According to Edwards and Hart (2006), in order to develop a culture of best practice in handling materials, it is important that staff, and ideally users, receive regular training in appropriate handling techniques, and that material users are provided with the necessary aids and equipment . If users cannot be given training, staff must be able and ready to intervene when there are

harmful practices. According to Lewis (2000), an early target must be to ensure that all staff are aware of the importance and responsibility of handling. It is crucial that high standards are maintained in the public areas, where trained staff must ensure that users are aware of their responsibility when handling original materials. Strong standards of supervision must be maintained, and it is recommended that pencils only be used for note taking. The expected standards of behavior must be published and made available to users - no smoking, eating or drinking. Morris Library Research Guide (2013) stated that it is always important to handle and care for books properly because proper handling ensures that you and future library patrons will continue to have access to the information you need. Avoid mutilation by marking library materials with pencil and ink for it permanently damages paper and makes it harder for other library patrons to use. Avoid putting Dog-ear (folding down the corner of a paper) on library materials. Dog –ears permanently damage paper and can never be removed and overtime the folder corner will weaken and break off further damaging the item. Avoid putting paper clips on materials for it puncture and dent the pages of books and paper clips that get left on an item can stain materials as they rust over time and finally avoid cutting out pages from books or other library materials for cutting pages out of library materials permanently defaces them and ruins them for other library patron.

Flattening

In fattening, it is important to remember that moist paper is weak and very vulnerable to damage, and salvaging damaged books can be very time consuming, so they should be handled with the utmost care by drying and flattening under precisely controlled conditions. Paper documents that have been folded or rolled for many years have a tendency to resist opening. Sometimes a document may even be so stiff and brittle that it will crack or break when opened.   Today Moore (2011) demonstrated how to flatten a book. First you lightly mist a page, using a mister that sprays a very fine mist, interleave with a blank piece of paper every few pages, put a board over the book, and put a weight on the board. One must make sure that the board is slightly larger than the book.

More so, it may be necessary to humidify the document in order to unfold or unroll it safely. Ohio Preservation Council (OPC) (2009) supported by saying that sometimes the half title page, the frontispiece, the title page or a leaf in the text becomes folded or crumpled. It may or may not be detached from the text. The leaf may have badly frayed edges and/or parts missing. Before any repairs can be made the leaf must be flattened. When the leaf is flattened the decision about extensive mending is made. If the book is from the circulating collection an alternate solution to making repairs might be considered. Backing the leaf with heat-set tissue is one solution. Making a photocopy of a badly damaged leaf and tipping it in can be another solution.

According to Northeast Document Conservation Center (NEDCC, 2012) Flattening is always necessary following aqueous treatment. Flattening is also helpful for rolled or folded paper that cannot gently and safely be opened. It is usually done between blotters or felts under moderate pressure.

http://nedcc.org/free-resources/preservationleaflets/7.

Pest Control

According to Pinniger (2012), many collections of old books, manuscripts and archives will show signs of damage by insect pests. Holes in books and bindings, large chewed areas and scraped surfaces are all evidence of pest attack. Much of this damage is probably historic and no longer active, but it is important to understand pests and so prevent further damage to collections. Different species of insects have different requirements of food, temperature and humidity. They are also influenced by the climate and building they are in. Infestation in books can be controlled by both physical and chemical treatments, but the aim of anybody responsible for collections should be to prevent pests from becoming established and causing damage. Prevention by using Integrated Pest Management (IPM) is cheaper and far more effective than expensive remedial treatment. According to Baughman (2012), the most common pests are cockroaches, silverfish, and various types of beetles. They feed on dirty organic substances such as paper, pastes, glues, gelatin sizing, leather, and book cloth, birds' nests are also a major source of

food for insects, and bird droppings are corrosive. They prefer warm, dark, damp, dirty and poorly ventilated conditions. Their damage is usually irreversible-texts and images lost by insects eating and boring through paper and photographs cannot be replaced. Termites can devastate buildings and collection. Insects and vermin are naturally attracted to paper because paper is made of cellulose, starch and protein, materials that provide plenty of nourishment for pests to thrive on.

Canadian Conservation Institute (2002) stated that book lice feed on mold spores found on paper and cardboard, and although they do not cause visible damage, their decomposition and excretions can stain paper and may also nourish other pests, continuing the cycle of damage. To prevent infestation, a clean environment is necessary; dust often and keep food and drink away from the objects and storage areas. If you discover pests, they should first be identified so that appropriate measures can be taken. Library of Congress informs that freezing the objects is an option for pest mitigation, and a good rule of thumb for most insects is to freeze to the center of the object within four hours at a temperature of -20°C (about -4 degrees Fahrenheit) for at least 72 hours, then to freeze the materials over a 24-hour period. However, some materials should not be frozen, such as books made with leather, because the cold temperatures may cause the fat to rise to the surface of the leather resulting in a white or yellow area called a bloom. A professional conservator should be able to identify what materials can be

frozen. The use of insecticides directly on collection materials is not recommended, however if the infestation is severe and fumigation is the best option, the affected objects should be separated from the rest of the collection for treatment.

In Monitoring to detect insects, Baughman (2012) stated that the use of traps and its monitoring is the key top successful Pest management. And that a trapping program is an integral part of pest prevention not an end in itself. Trapping programs should not be so intensive or extensive that they outstrip resources. Trap records enable you to make decisions based on facts not guesswork.

The procedure for trapping programs as presented by Baughman is as follows

Why Use Traps?

Traps will catch insect pests before they can be found visually; traps will catch a wide range of pest species; traps will catch adults and larvae;

Traps can be placed in areas that are difficult to inspect; trapped insects are evidence that can be identified and trapped insects can be counted

Trap Types:

Sticky blunder traps for crawling and flying insects; large roach traps;

smaller tent traps; Hanging moth traps and Window strips.

Traps with attractant pheromone lures. Lures are available for:

clothes moth, furniture beetle, cigarette beetle, biscuit beetle and carpet beetle.

Where to Place Them: On the floor, in wall/floor angles, in corners, in dark areas, on windowsills, near sources of water, use a general spread of blunder traps in all display areas and storage areas. Use a few pheromone traps in specific areas.

Recording Results: -Record regularly.

Record species.

Record whether they are adults or large or small larvae.

It is better to record catch once every two months regularly than to try to record every week for a month and then give up!

What Do The Results Mean?

Trap catch may be used to identify the presence of a pest.

One trap catch may not mean much; it is only by recording results over a period of time that a picture will emerge.

Using a pheromone trap for the first time may cause panic as it may catch a great deal more insects than blunder traps.

Use pheromone traps in the same way as blunder traps, but remember that they are much more sensitive.

Catch may show:

An increase in insect numbers in one area

Spread of a pest from one area to another

Invasion of adults in summer

Localized infestation from a problem area

Failure of a control treatment

The procedures described have been used by the staff of the conservation department of the Ransom Center and are considered suitable by the conservation department as described; however, the Center will not assume responsibility for damage to your collection should damage result from the use of these procedures.

Olubanke (2010) submitted that paper identifies moulds as the most important biodeteriorating agents of library materials. In addition to destroying, disfiguring and staining books, the moulds have been linked to numerous adverse human health effects that fall into three categories: allergic, toxic and infectious. The other biological agents include bacteria,

insects and rodents. The important insects in tropical environment are cockroaches and termites.

Traditionally, libraries have relied on pesticides and fumigants to reduce mould attack and infestation. Increasingly it has been recognized that there are considerable disadvantages to the repeated use of chemicals to deal with the problems associated with pests and mould. Pesticides and fumigation chemicals do not prevent damage occurring to material as applications are made in response to an observed outbreak of mould or pest damage. The chemicals used can pose health hazards to staff and damage to paper-based materials. But if the chemical is according to UNESCO Conservation guidelines, it will work effectively. Furthermore, unless the cause of the problem is ascertained it is likely to reoccur. Monitoring for pests and mould is the most effective way to prevent damage to paper-based materials. Parker (n.d) supported by saying that integrated pest management is a strategy to prevent and manage infestation by preventive, long-term control measures. Most of the insect species likely to infest paper materials are attracted not by the paper itself but by the sizes, adhesives and starches, all of which are more easily digested than the cellulose that makes up paper. Insect damage does not stem solely from insects eating material; collections are also affected by tunneling and nesting activities and by bodily secretions.

The Manager, Queensland Archives,(2007) opined that the purpose of Integrated Pest Management (IPM) is to control the ingress of pests into records storage areas and limit the use of fumigants and pesticides in the environment by using a range of integrated pest control strategies. More so integrated pest management can be used in all types of collection, whether large or small. To prevent pests attacking small collections:

• Check collections regularly for signs of pests, Use pest traps in the area Keep the books (and rooms where they are kept) clean, avoid keeping books in damp or humid areas. Implementing an IPM programme in a large collection can be a daunting task. It is therefore important to identify priorities and plan to cover the collection in achievable steps. A suggested plan of action is as follows:

Integrated pest management strategies encourage ongoing maintenance in archive or library building. Activities include; building inspection and maintenance, climate control, restriction of food and plants, insect identification, staff training, regular cleaning, proper storage, control over incoming collections to avoid infestation of existing collections and routine monitoring for pest, library management must realize that no simple solutions exist to the problem of achieving maximum prevention and control of pests in library materials with minimum risk to the materials, staff, and the public. A combination of techniques is usually required to maximize the

effectiveness of any pest control program. The term "Integrated Pest Management" (IPM) has been coined to embody the concept that all pest control programs must rely on several approaches working in concert to affect the desired result. To design an effective and safe program for a facility, management must consider an IPM approach.

Provision of Functional Air Conditioners

Air conditioning equipment that is able to effectively cool and dehumidify the air must be chosen. If compromises have to be made, temperature must be kept to a maximum of 250C with the humidity not above 60% RH. If the level of both parameters cannot always be simultaneously achieved, it seems more important to keep humidity within the given limits than temperature. A stand-by generator must be provided to ensure a continuing power supply in case of failure of the public supply. The conflicting demands for airy storage and for dust preventive can only be met satisfactorily and simultaneously by preventing a good air exchange, using appropriate air-conditioning equipment in combination with the following radical dust proofing. Ogundare (2009) noted that air conditioners assist in stabilizing the temperature and humidity condition in libraries. This helps to sieve out particles and chemical pollutants.

It is worthy of note that air conditioners are of great necessity to the preservation of library materials. Consequently, there will be fast

deterioration of library materials if there are no air-conditioners. Insects, rodents and birds can all damage materials, but damage caused by insect is the most common. Functional air conditioners help to lower the temperature and relative humidity of the libraries. The importance of air conditioning system in the university libraries was meant to encourage cross ventilation and also to deny the agents of deterioration the needed high temperature (heat) and relative humidity (moisture) they needed to initiate deterioration. An active air flow partially reduces the ability of microorganisms to function, dries the environment, destroys their structures & removes their properties from the premises (Lugauskas &Krikstaponis, 2004).

Provision of adequate security to prevent theft, mutilation and Vandalism

According to (Ajegbomogun, 2004), the issue of library materials security is of growing concern to university libraries and library managers. This is because library materials constitute the bedrock for services provided to the university community and serve as important assets to the library. Also, helping our patrons learn, explore, discover and grow is what library system is all about. Library managers have been battling with the problem of insecurity of library materials, which resulted from man-made malpractices such as theft, mutilation, vandalism, fire which renders services ineffective, inefficient and insecure. Loss of library materials is problems that affects library worldwide. It is as old as the library themselves. It does not only cost

libraries large sums of money but it also affects the image of libraries negatively due to user's need that cannot be met. Therefore, securing and protecting the materials can help libraries provide information needs of the university community. Thus, all measures taken to guard against crime, attack, loss or damage are security.

Nikko and Yusuf (2008) observed that information is an essential part of a nation's resources and access to it is a basic human right. Information is not only a national resource but also a medium for social communication. With declining budgets and higher subscription cost, it is becoming difficult to meet the demands of library users. Libraries should therefore ensure the security and safety of their materials.

Most of the published literature on library security issues focuses on specific types of security breach. Theft, mutilation and vandalism are highly covered by research articles. Boss(n.d) also identified physical weaknesses in libraries in terms of unsecured windows, faulty emergency exits, unstaffed computer rooms, poor policies and procedures, lack of security plans, poor security points (exits, loading areas, windows, special collections) inadequate loans and renewal periods, lack of security manuals and poor signage as some of the causes of security breaches. Disruptive behavior is another security issue in libraries.

A number of studies (Momodu, 2002; Ajegbomogun, 2004) acknowledged that disruptive or criminal behavior can cause security problems in the library. Difficult patrons include those who are intoxicated or using drugs, mentally disturbed, and some juvenile users. Momodu (2002) asserted that libraries have faced varying degrees of delinquency in the use of their materials. The extent of this problem varies from one library to another, but seems to be universal. Ugah (2007) considered collection security breaches as formidable obstacles to information access and use. Such acts are serious problems that can result in user dissatisfaction. He identifies major security issues in libraries to include: theft and mutilation; vandalism; damages and disaster; over borrowing or delinquent borrowers; and purposefully displacing arrangement of materials.

Book theft is a major security issue in libraries, particularly in academic libraries, with special collections being the most targeted materials. Theft is only one type of collection security breach. Others include non-return of items by borrowers, vandalism, and stock destruction. (Ajegbomogun 2004). Mutilation is the defacement or damage of library materials. Mutilation of academic library materials has been reported by many researchers Mutilation or vandalism occurs when users knowingly tear, mark, or otherwise damage or destroy materials. Material mutilation takes many forms, ranging from underlining and highlighting text, tearing and or removing pages, and tampering with the content. Few students think of library mutilation and theft

as a crime. Ogbonyomi (2011) is of the opinion that vandalism, mutilation, defacement, theft, arson, and so on are problems regularly encountered by the materials of these libraries. The commodity the libraries promote: books and other information materials are valuable and expensive but are likely targets for criminal activities. The expected roles of the academic library tend to lead it to criminal activities. The more the control, safeguard and security levels there are, the less it resembles a library that is traditionally expected to serve as user. 'Theft of and malicious damage against books are difficult to combat because the risk of getting caught is very low, while the likelihood of success is high, criminal activities in academic.

Although theft and mutilation affect the optimal use of the library resources, security planning to guard against theft had not been accorded high priority in university libraries. Awareness and adoption of Restoration Practices in UNESCO Conservation Guidelines by university library managers and staff are highly needed to solve these problems. The Association of College and Research Libraries (2003, 2006) has also published two guideline, Association of College & Research Libraries. RBMS Security Committee. 2006. Guidelines for the security of rare books, manuscripts and other special collections. C & RL News, Jul/Aug: 426-433. This is retrieved from http://www.ala.org/ala/mgrps/divs/acrl/ standards/security rarebooks.cfms for handling theft in libraries and for handling rare and special collections.

Lamination

Lamination is a technique used to restore a book or document into a useable condition. According to Mohammed (2006) Lamination involves placing the original document together with back-up sheet impregnated with adhesives in a hot press. The heat and pressure activate the adhesive, which eventually fixes or laminates the back-up to the original. Lamination provides protective waterproof of transparent cover to all varieties of documents. Lamination provides a durable way to protect and enhance almost any type of printed material. It improves the quality of materials by enhancing colour and contrast, and providing a glossy "wet" look. Putatunda (2014) asserted that lamination process involves applying a film of plastic on documents or important papers in order to preserve them.

The process of application of a film of plastic on the surface of an item is known as lamination. When an item is given a plastic coating, it becomes tear-proof and waterproof since the laminating film encapsulates the item completely, by being bonded to both its sides. Carter (2015) opined that Lamination is the technique of manufacturing a material in multiple layers so that the composite material achieves improved strength, stability, sound insulation, appearance or other properties from the use of differing materials. Lamination is a method of strengthening fragile papers. Less time-consuming than traditional methods. A laminate is usually permanently assembled by heat, pressure, welding, or adhesives. This is retrieved from

http://spiralbinding.com/files/WF00003/Lamination101.pdf

The lamination process involved deacidifying a document, layering it between tissue and thin sheets of plastic, and fusing them together in a heated press. Lamination refers to the process of fusing a sheet of paper between two thin sheets of plastic usually cellulose acetate. It strengthens fragile papers and provides stability for weak or damaged documents in less time than traditional methods, making it cost-effective for large collections. Collections were often laminated before microfilming, to facilitate rapid handling. Lamination was also seen as a means of preventing damage from environmental contaminants and grime from handling.

Photocopying

According to Akporhonor (2010) in-house photocopying into permanent durable paper is an excellent way to preserve acidic paper materials. It also provides restoration for fragile materials and those that are heavily used in the library. Ngulube (2003) noted that photocopies lack permanence if they are not done on acid-free paper. Therefore, this operation needs to be handled with care. (Olatokun, 2008) asserted that this preservation facility was responsible for preserving library materials that were vulnerable to damage and loss through constant handling and poor environmental conditions as well as to facilitate access to endangered research materials. When photocopying books, do not open them wide and

press down hard. That could break the glue and linings of the spine, causing a fracture at that point in the book. It will also damage the sewing, causing the book to be at risk for loose leaves. To restore the content of library materials that are unstable or subject to deterioration, photocopying with permanent and durable paper is an often-used option. In order for a book to be reproduced in this manner, it must fall outside the current copyright restrictions. Photocopying must be used judiciously since the copying process can cause damage to fragile items; therefore, it is not an appropriate option for books with art factual value. More so, one proactive solution to the problem of acid deterioration of books is to use acid-free or alkaline paper. Alkaline paper is more stable and, therefore, has a much longer life than acid paper. Alkaline paper is brighter, more opaque and smoother than acid paper and this provides improved print quality and colour reproduction.This is rertrieved from http://lcweb.loc.gov/preserv

Encapsulation

According to Twain (2011), encapsulation is a method of safely protecting flat items between two sheets of clear polyester film, often referred to as Mylar. The Mylar allows a document to be handled without the transfer of harmful oils from your skin that could lead to further damage, as well as creating a microclimate around the document. This is the method adopted and approved by International Organization for Conservation of Paper Documents. The system can be done by placing the document in

between two bigger size polyester films, and their four sides are to be sealed either by double sided tape or by machinery methods. Encapsulation is not advised to be used for very fragile documents. The air in between the document and the polyester film will react with paper (hydrolysis/oxidation) and degrade the paper still further. Encapsulation allows you to view and handle a document without exposing it to hazardous elements. The process involves the positioning of a flat document between two pieces of polyester film that are then sealed on all sides.

Encapsulation is a system of preventive covering that consists in putting the document, without any adhesive, inside a flat, transparent and hermetically sealed sleeve and prevents or guards against the action of external agents. As with lamination, before encapsulating the document any agent that can cause foreseeable damage must be eliminated. This is retrieved from http://www.unesco.org/webworld/ramp/html/r9006e/r9006e0e.htm

Ritzenthaler (2000) supported by saying that it is a paper strengthening technology developed by the Library of Congress. In this process, single sheets of paper are enclosed between two sheets of Mylar or other polyester films, which are then sealed around the edges. According to Shahani and Wilson, (2000) paper should be deacidified before being treated with polyester encapsulation. Because it is stable, easily reversed, and introduces no harmful products, the polyester film encapsulation process is preferred

over cellulose acetate lamination. Both encapsulation and lamination have limited application to treating books since sheets of paper have to be processed individually.

Fumigation

Fumigation continues to play a valuable role in many pest control operations; however, both the concepts and the procedures for controlling insects and other organisms are changing. With increased public concern over the adverse effects of pesticidal chemicals on human health and the environment, greater emphasis is being given to methods that can circumvent the use of these materials. Nevertheless, the need for chemical pesticides, particularly the fumigants, is likely to continue for many years to come; fumigants have unique properties and capabilities that permit use in numerous situations where other forms of control are not feasible or practical.

Fumigation is just one of a number of methods that can be used for controlling pests in stored products. The best control is likely to be obtained when all appropriate measures are taken to eliminate pest organisms. In an effective pest management programme, methods of prevention and control are integrated to give maximum protection of goods at the lowest possible cost. This made Asiamah (2008) to explain that Fumigation is the process of exposing documents to chemical fumes known as fumigants in order to arrest biological infestation of microorganisms such as fungi, insects and rodents.

There are different types of fumigants. However the choice of one type depends on the kind of infestation the librarian is dealing with. When this method is applied the respiratory organs of insects and rodents are stifled, which results in their death. For effective fumigation, there is the need to have a compact chamber: a vacuum chamber where there would be no in-flow or out-flow of air. The fumes are then injected to circulate and infiltrate the documents to kill the micro and macro organisms. The practice of pest control is becoming increasingly specialized and requires professional personnel who are familiar, not only with the pest and the pesticide, but who also have a good knowledge of the many factors related to pest infestation and control. Even in field applications, where much of the work may be done by relatively unskilled people working under a well-trained foreman, a working knowledge of the principles of fumigation can be an asset.

In addition, reasonable physical fitness, mental alertness and the ability to understand verbal and written instructions and to carry these out carefully are required. In this field, physical fitness includes absence of any respiratory trouble which might make the operator unduly susceptible to the effects of gases or protective equipment. Personnel assigned to fumigation work should receive thorough instructions on the properties of fumigants and training in safe methods of handling.

Finally, to eliminate the above said microorganisms, insect, etc.incoming collections should be fumigated to kill living insects and eggs

and a fumigation treatment that is in line with UNESCO Conservation Guidelines should be considered. In the theoretical studies above, an unfortunate trend, however is that many authors have written about only preservation and restoration practices without relating it to UNESCO Conservation Guidelines. So, the current study hopes to make some advances in rectifying that situation. The author initiated her research with the intention of determining the extent of awareness and adoption of UNESCO Conservation Guidelines by university library Managers and staff in south east, Nigeria.

Binding

Crespo and Vinas (2009) stated that binding entails dismantling and reassembling the entire volume if the leaves need treatment or if the binding has become weak. A careful record of the order and arrangement of each book is indispensable so as to avoid mistakes when rebinding. The establishment of a functional bindery unit was, among many other conservation initiatives that were put in place by the library. Books and journals require binding to withstand the rigours of library use. Ngulube (2003) stressed the need for a combination of facilities and maintenance procedures that are conducive to longevity of information resources. In-house repairs ensure that the library has complete control over its bibliographic resources. The bindery could also be very instrumental in binding back issues of newspapers and journals to facilitate a relatively easier storage, retrieval

and dissemination of information. Recognizing the limitations of time and resources, books must be selected and prioritized within the constraints of the university libraries.

Library binding is one type of rebinding probably recommended for books more than any other type of information sources. It is important to select an appropriate type of re-binding when they become damaged. Books that have art factual or associational importance in addition to information values should be sent to a professional conservator for treatment.

The primary goals of library binding today are good open ability and minimal intervention, as well as durability and low cost. Therefore in selecting a binder, choose one who is certified by the library binding institute, in case there is one in Nigeria, that way there will be an assurance that the binder is familiar with the procedures as well as with the current trends and new techniques in binding.

Deacidification

Ngulube (2003) stated that acidity is the major cause of deterioration of non-alkaline permanent paper. Acidity attacks the cellulose in paper, breaks down the fibre and weakens the paper. Deacidification is one major technique for preserving books and records. It is a technique reserved for books that are acidic and at risk of loss if no action is taken. Deacidification, if effectively carried out on acid paper raises the pH level of treated paper to

the acceptable range of 68-10.4 pH; achieves minimum alkaline reserves and extends the useful life of the paper. Deacidification procedures are effective for books and paper that are not yet brittle. They cannot, however, restore lost durability. An ideal tool for the preservation is a process that both deacidifies and strengthens books in masses. Deacidification processes are classified according to the method by which the neutralizing and buffering agents are introduced: aqueous (water-based), non-aqueous (non-water solvent), and vapor. The aqueous deacidification treatment is limited to lose sheets which makes it very labour intensive and thus expensive. The individual sheets are dipped in a solution containing one or more alkaline compounds. Aqueous treatments are not appropriate for items containing water-soluble inks, pigments, and dyes so each page must be tested to make sure it is compatible with the solvents being used.

Non-aqueous deacidification solutions employ organic solvents rather than water as the solvent carrier of the alkaline buffering agent. Advantages of this process as compared with the aqueous method are that it permits the treatment of many documents that contain water-soluble inks and other media, it may be used for sound bound volumes, and it is quick-drying. Non-aqueous solutions may be applied to paper by spraying, dipping, soaking, or brushing.

Kundrot (2001) described that the post treatment of large number of books and papers to neutralize the acidity is known as "Mass Deacidification" Early methods used relied on aqueous deacidification. In this procedure, single pages were sprayed or submerged in a water based alkaline buffer solution. After treatment, the sheet was held flat and dried. Materials, especially ink and dyes, must be pretested to avoid damage. If a bound volume needed treatment, the book must be unbound, and then each sheet treated individually, dried carefully and the paper rebound. This process was extremely lengthy and labour intensive. Although simple water washing reduces acidity, the addition of an alkaline buffer to paper is sometimes recommended.

This is appropriate for papers that will be subject to acid hydrolysis even after washing, acidic papers that cannot be washed, and acidic papers that will be encapsulated. Sometimes alkalization is achieved by immersion in an aqueous solution of an alkaline substance such as magnesium bicarbonate or calcium hydroxide. If water-soluble media are present, the artifact may be treated non aqueously with an alkaline salt dissolved or suspended in organic solvent. Non aqueous solutions are usually applied by spraying. While the addition of an alkaline buffer is often beneficial, such chemicals may cause alteration or even damage to certain components of a work of art. Some colors, for example, may change if subjected to alkaline conditions. This change may be immediate or may occur over time. For this

reason alkalization is not recommended for all materials. Like all conservation procedures, the decision to alkalize must be made on a case-by-case basis and should be left to qualified conservators.

Empirical Studies

Awareness and adoption of the UNESCO Conservation Guidelines preservation and restoration Practices by university library management and staff in South East, Nigeria.

Ugwuanyi (2004) carried out a research on the preservation of traditional library materials in academic libraries in Enugu State. Descriptive survey research design was used for the study. The population of the study was five academic libraries in Enugu State. A structured questionnaire with 12 items which answered the 4 research questions was used. The study tried to find out the current preservation practices of academic libraries in Enugu State, the problems associated with these practices, the perceived preservation needs and the strategies for improved preservation needs. The findings of the study showed that many preservation practices were in use in these libraries. The study also revealed that, some of the problems militating against the operational efficiency of these practices were poor handling practices, lack of preservation personnel, poor quality paper, poor environmental storage facilities and inadequate funding. She noted that storage needs bindery services as well as personnel needs are needed in the library. She then recommended that there should be an establishment of

preservation policy co-operative, better funding of academic libraries in the state as well as disaster preparedness for improvement.

The above study emphasized on current preservation practices in academic libraries in Enugu State while the present study discussed the awareness and adoption of UNESCO Conservation Guidelines by university library managers and staff in South East Nigeria.

Ogbodo (2004) also examined how information sources in our university libraries are protected and the effectiveness of methods adopted in protecting these information. Four federal university libraries and four state university libraries altogether eight university libraries in south-east states in Nigeria was used and 63 academic librarians was used from the eight university libraries. A questionnaire was used to collect data. The result indicated that university libraries used security men at the entrances and exits of the libraries and surveillance by librarians in protecting their information sources. The libraries that were surveyed showed that they do not have electronic security systems and staff security programmes are not mounted. Ogbodo, therefore, recommended that libraries should include electronic methods of securing information sources, and that there should be supervision and developing of a realistic security programme, improving environmental condition of book storage and expanding the capacity of repair and reformatting of damaged books and increasing preservation resources.

The study above examined how information sources in our university libraries are protected and the effectiveness of methods adopted in protecting these information. It was limited to Four federal university libraries and four state university libraries but the present study was on awareness and adoption of UNES CO Conservation Guidelines and it studied all the university libraries in south-east states in Nigeria.

Omede (2004) examined the archival preservation at national Archives of Nigeria, in Enugu. The study tried to identify the human and material resources available for preservation and to identify the preservation practices undertaken by these archives as well as the problems associated with the practices and the effects of these problems on its services. Measure that would improve the services was suggested. A questionnaire was used to collect data from 61 Archivists, technical staff and librarians at National Archives Enugu. Simple frequency tables and percentages were used for data presentation and analysis. The result of the findings indicated that there is an inadequate fund for preservation; inadequate skilled staff and inadequate resources and equipment.

The study tried to identify the human and material resources available for preservation and the preservation practices undertaken by these archives as well as the problems associated with the practices and the effects of these problems on its services .But the present study tried to find out the level of

awareness and adoption of UNESCO Conservation Guidelines by university library managers and staff in south East, Nigeria.

Sule and Ademu (2005) carried out a survey on the impact of preservation and conservation of library resources. A case study of Francis Sulemanu Idachaba library (FSIL), University of Agriculture Makurdi in Benue State was used. The study examined the major root causes of deterioration of library materials from the internal factors to the external as well as the biological factors that facilitate the deterioration of library materials. The result of the study indicated that the library has been making efforts to fight against all the agents of deterioration of library materials and revealed that it is a continuous one.

Hassan and Emmanuel (2006) examined library users' opinions on mutilation and book theft in selected college libraries in Maiduguri, in Borno state. A survey research method was used for this study. Three selected college libraries in Maiduguri were used and the population was 8366. A stratified sampling technique was used and Nine Hundred and five was sampled. Descriptive statistics using frequency distribution and simple percentages were used for data analysis. The result of the findings showed that mutilation and book theft in the college libraries hinders the expected services. As a result of this, it was recommended that bodily search of users should be introduced to curtail the incidence of mutilation and book theft. They went ahead to suggest that emphasis should be laid on attitudinal

changes when teaching the use of library to users so as to change their attitudes towards self-centeredness in the use of library resources.

Olatokun (2008) carried out a study on the various techniques used in the preservation and conservation of library materials in selected university libraries in Nigeria. It particularly examined the causes and nature of deterioration, patterns and strategies used in their control, existence of preservation and conservation policies and constraints limiting effective preservation and conservation. The survey approach was adopted for the study. The result of the study shows that the most used techniques of print and non-print materials in the university libraries is cleaning and dusting which is 5.219% followed by photocopying the materials-3.03%,to have duplicates while re-binding is 2.23% and shelving library materials to allow for free flow of air is 2.15%. The result of the findings also revealed that cleaning and dusting of library materials was the commonly used technique. Furthermore, the findings of the study also revealed that preservation and restoration techniques, though adopted in the university libraries were not effectively used.

The study of Olatokun (2008) looked at the various techniques for preservation and conservation and the emphasis was on the causes and nature of deterioration. The present study is looked at the extent of awareness and adoption of UNESCO Conservation Guidelines by university library

managers and staff in south East, Nigeria. The findings reported that Cleaning and dusting were commonly used though the techniques adopted by the libraries were not effectively used. However, the study was not looking at the conservation techniques as regards to UNESCO Conservation Guidelines and its awareness and adoption which the present study is set out to achieve rather, emphasis was placed on finding out the various techniques used without checking whether the usage is in line with UNESCO Conservation Guidelines. Also this study was carried out in selected university libraries in Nigeria while the present study was carried out in south east University Libraries in Nigeria.

Asiamah (2008) carried out a case study of the Kwame Nkrumah University of Science and technology main library in Ghana. The study was on preservation of print and non-print library materials. The findings reviewed that physical building, storage practices, pollution, light, and biological agents, security of library materials as well as the poor handling of library materials were major constraints that the university library faced in the area of preservation and restoration of library materials. From the various findings on conservation techniques/practices, it can be concluded that university libraries adopt conservation techniques/practices for the preservation of their materials yet there is a gap to be filled because none of the authors of the work used UNESCO Conservation guidelines for his work. Thus, conducting an empirical study on extent of awareness and adoption of

UNESCO Conservation Guidelines among university library Management and staff in south-east Nigeria becomes imperative.

Fadeham (2009) on the other hand, examined the preservation and conservation of newspapers in Nigerian university libraries. Five federal university libraries in South-Western Nigerian universities were surveyed. He compared their preservation and conservation procedures with that of international practices. The instrument used for data collection was a structured questionnaire and an interview. The findings of the study revealed that the poor storage facilities (housing, storage environment) lack of bibliographic control, absence of skilled staff and training in preservation and conservation, lack of content indexing of papers (either in clippings or page by page), lack of full understanding of the concept of preservation and conservation no sign of reformatting techniques (except in one of the libraries) and obvious deterioration of resources. He therefore recommended that awareness of all these things that the university libraries lack should be created in the libraries. He also noted that the magnitude of the problem is high and requires a generic solution in all the university libraries and other related information agencies in Nigeria.

Iwhiwhu (2010) conducted a research on preserving information-bearing materials in higher education institutions in Nigeria. This study was undertaken to assess the preservation programmes and activities in libraries in Nigeria. A survey was used to gather data on preservation and restoration

of information bearing materials in Delta State University, Abraka (DELSU) and Petroleum Training Institute Library, Effurun (PTI). A questionnaire, observation, and interview were the instruments used to collect data. The findings revealed that 35(70%) respondents disagreed the fact that cleaning and dusting was the only method for preserving library materials. More than 80% of respondents stated that binding is very important in the conservation of library materials.

Similarly, Ogbodo (2011) researched on preservation of information sources in polytechnic libraries in South East States of Nigeria. This study was aimed at examining the preservation of information sources in polytechnic libraries in South Eastern States of Nigeria. The entire population of 33 academic libraries was used for the study. A questionnaire was used to gather data and the results showed among others that there were problems of preservation of information sources in polytechnic Libraries in Nigeria. These polytechnic libraries use ineffective methods to combat the problems of preservation. It was recommended that adoption of digital technology in preservation among others could help these libraries preserve their materials effectively. This study pays more attention to preservation method used by the polytechnic. The findings revealed that ineffective method of preservation was used by the polytechnic libraries. The present study is to find out if there is awareness and adoption of conservation guideline of

UNESCO. Also this study was on Polytechnics in South Eastern Nigerians while the present study is on the university libraries.

Shameend (2011) investigated preservation and conservation of library materials, techniques and practices in the University of Zambia Library and its two branches: the Medical Library and the Samora Michel Veterinary Medicine Library. The population of the study was thirty-five library staff, six bindery staff and eleven academic faculty members in the Department of Library and Information Studies at the University of Zambia. Based on a questionnaire survey, interviews, observation and content analysis of key documentary sources, the factors that affect preservation and conservation of library materials in the University libraries were identified. The research findings revealed that although the University of Zambia Libraries were involved in the long-term preservation of library materials, they did not provide a well planned preservation and conservation care because preservation aspects were given least priority and conservation programmes were addressed in varying degrees in the libraries. The study identified lack of preservation and conservation planning, policies and weak commitment from the University of Zambia management on funding of libraries at the University of Zambia.

Sawant (2014) carried out a study on preservation and conservation practices in Mumbai. A survey using structured questionnaire were used in studying in academic libraries in Mumbai, the study revealed that there were

no written policy in all libraries in Mumbai, in addition to that is lack of trained manpower and lack of funding was the main constraint to preservation and conservation. The study concludes that the higher library authorities and policy makers should be convinced to make provision not only for preservation but also for long term survival of libraries.

Finally, as a result of a lack of information about the preservation of library and archives materials in Massachusetts, libraries and records repositories carried out a survey to determine the preservation needs of public, academic and special libraries, manuscript, repositories, historical societies and town clerks' offices. Data for the State of Massachusetts survey was collected by means of a questionnaire that was mailed to 1100 institutions. Nine hundred and sixty (87%) respondents returned completed surveys. The survey results revealed that some buildings did not have any security measures in place. The findings indicated that 70% of the institutions could not maintain a constant climate throughout the whole year and most respondents knew very little about the effect of the environment on their collections. In terms of disaster preparedness, the study findings revealed that 93% had fire extinguishers, 60% reported having smoke detectors, 44% had heat detectors and 25% had sprinkler systems. Forty six percent of the respondents' fire detection systems were not connected to the local fire department. However, on preservation issues, the findings showed that preservation plans were nonexistent, whilst 21% of the respondents used

microfilm for preservation. This study emphasized more on the effect of environment on library collections which is different from the present study. This is because knowing the effect of environment on collections without being aware or adopt the guideline that will help solve the problem is still an error.

The studies discussed above proved actually that libraries are fully involved in conservation practices but none based their practices on UNESCO Conservation Guidelines. So, obviously a gap is created that need to be filled by this present study.

Summary of Literature Review

The review of literature was done under four subheadings thus: Conceptual Framework; Theoretical Framework; Theoretical Studies and Empirical Studies.

`   Conceptual framework was carried out with a careful definitions, explanations and discussion of the concept of conservation and UNESCO Conservation Guidelines.

Theoretical frame work looked at a theory of conservation which is related to the present study. The operational conservation theory was used as a theoretical model to explain the conservation practices.

Theoretical studies looked at opinions of many authors on preservation and restoration practices adopted by the university library Managers and staff in South East, Nigeria.

In empirical Studies, research works of different authors as related to the present study were reviewed and their findings discussed.

After the review of related literature, it was observed that previous studies have been carried out on conservation practices by university library management and staff but none based their studies on UNESCO Conservation Guidelines. There was no research work known to the researcher on the extent of awareness and adoption of UNESCO Conservation Guidelines by university library management and staff in South East Nigeria. Thus, a gap of such investigation obviously existed which this present study would fill.

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CHAPTER THREE

METHOD

This chapter deals with the procedures and techniques that were used for the study. It covered such aspects as research design, area of the study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection, and method of data analysis.

Research Design

The research design that was adopted for this study is the survey research design. A survey research design is one in which a group of items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire population (Akuezuilo & Agu, (2015). The survey research design was considered appropriate for this investigation because it helped the researcher to collect standardized information from the respondents especially as questionnaire was used as the data collecting instrument. Also, it attempted to collect and analyze the characteristics of a whole population or situation by studying a representative sample.

Area of the Study

The university libraries in South- Eastern zone of Nigeria were used for this study and they include Abia, Anambra, Ebonyi, Enugu and Imo States. The South-Eastern States of Nigeria has a total population of sixteen million, three

hundred and ninety five thousand, five hundred and fifty five (16,395,555) people with a growth rate of about 2.8% (Federal Government of Nigeria Official Gazette, 2007). Geographically, the South Eastern zone of Nigeria is situated towards the Southern coast of Nigeria. It is bounded in the East by Cross River State; West by Delta State; North by Kogi and Benue States; South by Rivers and Akwa Ibom States (National Assembly Statistical Information, 2008).

The zone is acknowledged as one of the comparatively educationally advanced areas in Nigeria. The appreciable level of literacy, and competitive spirit gave rise to large number of tertiary institutions and impressive distribution of university libraries in the zone. It has a total number of ten (10) public universities which are established, managed and funded by either by the states or the federal government. The list of the universities is shown in appendix B.

Population of the Study

The population of the study consisted of 704 university library workers, made up of 81 university library managers and 623 university library staff excluding private universities. This represented the total population of all the university library managers and staff in the South–East, Nigeria. The distribution of the population is shown in the Appendix B (142)

Sample and Sampling Technique

The total sample size for the study consisted of 350 library workers (50% of all the library workers). The method of simple random sampling without replacement (SRSWOR) scheme was used to select independent samples of 50 university library managers (about 60% of library managers) and 300 university library staff (about 48% of library staff) respectively. In drawing the samples, the 81 university library managers and 623 library staff that made up of the study population were considered as two separate and independent subpopulations. The use of the SRSWOR procedure ensured that the sample is a random sample and a good representation of the entire population. Akuezuilo & Agu, (2015) supported the use of 50%.

Instrument for Data Collection

The instrument that was used to collect data for the study was questionnaire. Two major research questionnaires were used. One was "Questionnaire for University Library Managers (QULIBM)," and the other was "Questionnaire for University Library Staff (QULIBS)". The two research instruments were developed by the researcher. (See appendix C (p.143)

Validation of the Instrument

To ensure the validity of the instrument, the initial draft of the questionnaire, the research topic, purpose of study, research questions and hypotheses were given to two experts in the Department of Library and Information Science

and an expert in the Department of Measurement and Evaluation from Nnamdi Azikiwe university Awka. They were requested to study the instrument and assess the suitability of language; adequacy and relevance of the items in addressing the research questions bearing in mind the purpose of the study. The experts carried out face and content validation of the constructed instrument and based on their corrections and input, the final copy of the questionnaire was produced. The evidence of validation is attached as Appendix F (p.176)

Reliability of the Instrument

Twenty (20) copies of the questionnaire for library management were distributed to randomly selected university library management for the test of the reliability of the instrument. Similarly, thirty (30) copies of the questionnaire for library staff were distributed to randomly selected university library staff for the test of the reliability of the instrument. The selected respondents used for the reliability tests were not included in the main survey sample. The university staff was from the University of Port Harcourt Rivers State.

After collecting the filled copies of the questionnaires, the reliabilities for the two questionnaires were tested using the Cronbach's alpha coefficient reliability test. The calculated Cronbach's alpha coefficient for the questionnaire for university library managers was obtained as 0.84. Similarly,

the calculated Cronbach's alpha coefficient for the questionnaire for university library staff was obtained as 0.81. We therefore conclude that the two questionnaire were reliable since the Cronbach's alpha coefficient for each of them is greater than 0.75 (see Appendices D1 and D2 (pp.157-160)

Method of Data Collection

The two instruments for data collection were administered on the respondents. The administration of the instruments was carried out with the help of five research assistants. The research assistants were trained on how to distribute and collect filled copies of the questionnaire. The data collection was done in such a way that one research assistant covered each state. The face to face method of data collection was used and responses from 46 library managers and 270 library staff were collected (316 in totality), after three to four visits. This accounted for 44.89% of the total university library staff and the managers (704 in totality) in the South Eastern Nigeria. The number of respondents could be said to be adequate as the non-return of the questionnaires or inability of the other targeted respondents to fill the questionnaires might be due to their very tight schedules.

Method of Data Analysis

The statistical tests used in the data analysis included the summated score and t-test. The research questions were analyzed using the Summated score while the hypotheses were tested using the t-test.

DECISION GUIDE

This is a guide for decision making in this work. For instance in the table below, if a library manager falls between figure 13-19, it means very low extent and if the library staff falls between 11-16, it means very low extent.

Scoring for Library Managers

Scoring for section BCDE for library managers	Remarks
1x13-1.49x13=13–19	Very low extent
1.50x13-2.49x13=20–32	Low extent
2.5x13-3.49x13=33–45	Moderate extent
3.5x13-4.49x13=46–58	High extent
4,5x13-5.0x13=59–65	Very high extent

Scoring for Library Staff

Scoring for section B and D for library staff.	Remarks
1x11-1.49x11=11 – 16	Very low extent
1.50x11-2.49x11=17 – 27	Low extent
2.5x11-3.49x11=28 – 38	Moderate extent
3.5x11-4.49x11=39 – 49	High extent
4.5x11-5.0x11=50 – 55	Very high extent

Scoring for section C and E for library staff.	Remarks
1x24-1.49x24=24 – 35	Very low extent
1.5x24-2.49x24=36 – 59	Low extent
2.5x24-3.49x24=60– 83	Moderate extent
3.5x24-4.49=84 – 107	High extent
4.5x24-5.0x24=108 – 120	Very high extent

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected from the field for this study areanalysed and the summaries presented in tables to highlight the findings. The presentation was sequentially done beginning with the answers to the research questions and then the testing of hypotheses.

Research Question 1

To what extent is the library management aware of the UNESCO conservation guidelines preservation practices?

Table 1: The extent library management is aware of the UNESCO Conservation Guidelines Preservation Practices.

Range of scores	N	%	Remarks
13 – 19	0	0	Very low extent
20 – 32	2	4.3	Low extent
33 – 45	4	8.7	Moderate extent
46 – 58	20	43.5	High extent
59 – 65	20	43.5	Very high extent

Table 1 shows that 20(43.5%) of the library management with the scores ranging from 59 to 65 are aware of preservation practices in the UNESCO conservation guidelines to a very high extent while 20(43.5%) of the library management who scored between 46 and 58 aware of them to high extent.

Research Question 2

To what extent is the library management aware of the UNESCO conservation guidelines restoration practices?

Table 2: The extent library management is aware of the UNESCO Conservation Guidelines restoration Practices.

Range of scores	N	%	Remarks
13 – 19	0	0	Very low extent
20 – 32	1	2.2	Low extent
33 – 45	9	19.5	Moderate extent
46 – 58	27	58.7	High extent
59 – 65	9	19.6	Very high extent

Table 2 reveals that 9(19.6%) of the library management with the scores ranging from 59 to 65 are aware of restoration practices in the UNESCO conservation guidelines to a very high extent while 27(58.7%) of the library management who scored between 46 and 58 are aware of them to high extent.

Research Question 3

To what extent are the library staff aware of the UNESCO conservation guidelines preservation practices?

Table 3: The extent library staff are aware of the UNESCO Conservation Guidelines Preservation Practices.

Range of scores	N	%	Remarks
11 – 16	4	1.5	Very low extent
17 – 27	30	11.1	Low extent
28 – 38	178	66.0	Moderate extent
39 – 49	56	20.7	High extent

50 – 55	2	0.7	Very high extent

Table 3 indicates that 178(66.0%) of the library staff with the scores ranging from 28 to 38 are aware of preservation practices in the UNESCO conservation guidelines to a moderate extent.

Research Question 4

To what extent are the library staff aware of the UNESCO conservation guidelines restoration practices?

Table 4: The extent library staff are aware of the UNESCO Conservation Guidelines restoration Practices.

Range of scores	N	%	Remarks
24 – 35	0	0	Very low extent
36 – 59	35	11.1	Low extent
60 – 83	171	63.3	Moderate extent
84 – 107	64	23.7	High extent
108 – 120	0	0	Very high extent

In table 4, it was observed that 171(63.3%) of the library staff with the scores ranging from 60 to 83 are aware of restoration practices in the UNESCO conservation guidelines to a moderate extent.

Research Question 5

To what extent does the library management adopts the UNESCO conservation guidelines preservation practices?

Table 5: The extent library management adopts the UNESCO Conservation Guidelines Preservation Practices.

Range of scores	N	%	Remarks
13 – 19	0	0	Very low extent
20 – 32	1	2.2	Low extent
33 – 45	5	10.8	Moderate extent
46 – 58	16	34.8	High extent

59 – 65	24	52.2	Very high extent

Table 5 shows that 24(52.2%) of the library management with the scores ranging from 59 to 65 adopt preservation practices in the UNESCO conservation guidelines to a very high extent while 16(34.8%) of the library management who scored between 46 and 58 adopt them to high extent.

Research Question 6

To what extent does the library management adopt the UNESCO conservation guidelines restoration practices?

Table 6: The extent library management adopts the UNESCO Conservation Guidelines restoration practices.

Range of scores	N	%	Remarks
13 – 19	0	0	Very low extent
20 – 32	1	2.2	Low extent
33 – 45	9	19.5	Moderate extent
46 – 58	27	58.7	High extent
59 – 65	9	19.6	Very high extent

Table 6 reveals that only 9(19.6%) of the library management with the scores ranging from 59 to 65 adopt of restoration practices in the UNESCO conservation guidelines to very high extent while 27(58.7%) of the library management who scored between 46 and 58 adopt them to high extent.

Research Question 7

To what extent does the library staff adopts the UNESCO conservation guidelines preservation practices?

Table 7: The extent library staff adopts the UNESCO Conservation Guidelines Preservation Practices.

Range of scores	N	%	Remarks

11 – 16	20	7.4	Very low extent
17 – 27	14	5.2	Low extent
28 – 38	129	47.8	Moderate extent
39 – 49	99	36.6	High extent
50 – 55	8	3.0	Very high extent

Table 7 indicates that 129(47.8%) of the library staff with the scores ranging from 28 to 38 adopt preservation practices in the UNESCO conservation guidelines to a moderate extent while 99(36.6) who scored between 36 and 49 adopt them to high extent.

Research Question 8

To what extent does the library staff adopts the UNESCO conservation guidelines restoration practices?

Table 8: The extent library staff adopts the UNESCO Conservation Guidelines restoration practices.

Range of scores	N	%	Remarks
24 – 35	19	7.0	Very low extent
36 – 59	54	20.0	Low extent
60 – 83	153	56.7	Moderate extent
84 – 107	44	16.3	High extent
108 – 120	0	0	Very high extent

In table 8, it was observed that 153(56.7%) of the library staff with the

scores ranging from 60 to 83 adopt restoration practices in the UNESCO

Conservation Guidelines to a moderate extent.

Testing the null hypotheses

Null Hypothesis 1

There is no significant difference on the extent university library management is aware of the UNESCO Conservation Guidelines preservation practices due to the status of their university.

Table 9: *t*–test on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines preservation practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	26	56.04	9.09			
				44	0.96	0.343	NS
State	20	53.45	9.08			

Table 9 indicates that at 0.05 level of significance and 44df the calculated t0.96 with Pvalue of 0.343 which is greater than the critical 0.05, the first null hypothesis is therefore accepted. Then, there is no significant difference on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines preservation practices.

Null Hypothesis 2

There is no significant difference on the extent university library management is aware of the UNESCO Conservation Guidelines restoration practices due to the status of their university.

Table 10: *t*–test on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines restoration practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	26	51.35	9.28			
				44	0.22	0.829	NS
State	20	50.75	9.13			

Table 10 indicates that at 0.05 level of significance and 44df the calculated t0.22 with Pvalue of 0.829 which is greater than the critical 0.05, the second null hypothesis is therefore accepted. Then, there is no significant difference on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines restoration practices.

Null Hypothesis 3

There is no significant difference on the extent university library staff are aware of the UNESCO Conservation Guidelines preservation practices due to the status of their university.

Table 11: *t*–test on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines preservation practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	164	32.24	5.45			
				168	4.92	0.000	S
State	106	35.92	6.74			

Table 11 indicates that at 0.05 level of significance and 168df the calculated t4.92 with Pvalue of 0.000 which is less than the critical 0.05, the third null hypothesis is therefore rejected. Then, there is significant differences on the extent university library staff are aware of the UNESCO Conservation Guidelines preservation practices.

Null Hypothesis 4

There is no significant difference on the extent university library staff are aware of the UNESCO Conservation Guidelines restoration practices due to the status of their university.

Table 12: *t*–test on the extent the federal and state university library staff are aware of the UNESCO Conservation Guidelines restoration practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	164	70.85	12.43			
				168	5.14	0.000	S
State	106	79.17	13.79			

In table 12, it was observed that at 0.05 level of significance and 168df the calculated t5.14 with Pvalue of 0.000 which is less than the critical 0.05, the fourth null hypothesis is therefore rejected. Then, there is significant difference on the extent university library staff are aware of the UNESCO Conservation Guidelines restoration practices.

Null Hypothesis 5

There is no significant difference on the extentuniversity library management adopts the UNESCO Conservation Guidelines preservation practices due to the status of their university.

Table 13: *t*–test on the extent the federal and state university library management adopt the UNESCO Conservation Guidelines preservation practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	26	57.65	8.79			
				44	1.29	0.204	NS
State	20	54.30	8.71			

Table 13 shows that at 0.05 level of significance and 44df the calculated t1.29

with Pvalue of 0.204 which is greater than the critical 0.05, the fifth null

hypothesis is therefore accepted. Then, there is no significant difference on

the extent the federal and state university library management adopt the

UNESCO Conservation Guidelines preservation practices.

Null Hypothesis 6

There is no significant difference on the extent university library management adopt the UNESCO Conservation Guidelines restoration practices due to the status of their university.

Table 14 *t*–test on the extent the federal and state university library management adopt the UNESCO Conservation Guidelines restoration practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	26	49.54	7.53			
				44	0.93	0.355	NS
State	20	52.05	10.71			

Table 14 reveals that at 0.05 level of significance and 44df the calculated

t0.93 with Pvalue of 0.355 which is greater than the critical 0.05, the sixth null

hypothesis is therefore accepted. Then, there is no significant difference on

the extent the federal and state university library management adopts the

UNESCO Conservation Guidelines restoration practices.

Null Hypothesis 7

There is no significant difference on the extent university library staff
adopt the UNESCO Conservation Guidelines preservation practices.

Table 15: *t*–test on the extent the federal and state university library staff adopt the UNESCO Conservation Guidelines preservation practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	164	34.83	7.62			
				168	2.10	0.037	S
State	106	37.23	11.07			

Table 15 indicates that at 0.05 level of significance and 168df the calculated
t2.10 with Pvalue of 0.037 which is less than the critical 0.05, the seventh null
hypothesis is therefore rejected. Then, there is significant difference on the
extent the federal and state university library staff adopts the UNESCO
Conservation Guidelines preservation practices.

Null Hypothesis 8

There is no significant difference on the extent university library staff
adopt the UNESCO Conservation Guidelines restoration practices due to the
status of their university.

Table 16: *t*–test on the extent the federal and state university library staff adopt the UNESCO Conservation Guidelines restoration practices.

Source of variation P≥ 0.05	N	X	SD	DF	Cal.t	Pvalue
Federal	164	64.63	15.24			
				168	5.19	0.017

S			
State	106	69.82	20.21

In table 16, it was observed that at 0.05 level of significance and 168df the calculated t5.19 with Pvalue of 0.017 which is less than the critical 0.05, the eighth null hypothesis is therefore rejected. Then, there is significant difference on the extent the federal and state university library staff adopt the UNESCO Conservation Guidelines restoration practices

Summary of the Findings

From the analysis, the following findings were made:

Few of the university library management 20(43.5%) are aware of the UNESCO Conservation Guidelines preservation practices to a very high extent while 20(43.5%) of the university library management are aware of them to high extent.

1. Only 9(19.6%) of the university library management are aware of the UNESCO Conservation Guidelines restoration practices to a very high extent while 27(58.7%) of the university library management are aware of them to high extent.

2. Most of the university library staff 178(66.0%) are aware of the UNESCO Conservation Guidelines preservation practices to a moderate extent.

3. Most of the university library staff 171(63.3%) are aware of the UNESCO Conservation Guidelines restoration practices to a moderate extent.

4. Few of the university library management 24(52.2%) adopt the UNESCO Conservation Guidelines preservation practices to a very high extent while 16(34.8%) of the university library management adopt them to high extent.

5. Only 9(19.6%) of the university library management adopt the UNESCO Conservation Guidelines restoration practices to very high extent while 27(58.7%) of the university library management adopt them to high extent.

6. Few of the university library staff 129(47.8%) adopt the UNESCO Conservation Guidelines preservation practices to moderate extent while 99(36.6) of the university library staff adopt them to high extent.

7. Most of the library staff 153(56.7%) adopt the UNESCO Conservation Guidelines restoration practices in to moderate extent.

8. There is no significant difference in the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines preservation practices.

9. There is no significant difference on the extent the federal and state university library management is aware of the UNESCO Conservation Guidelines restoration practices.

10. There is significant difference on the extent the federal and state university library staff are aware of the UNESCO Conservation Guidelines preservation practices.

11. There is significant difference on the extent the federal and state university library staff are aware of the UNESCO Conservation Guidelines restoration practices.

12. There is no significant difference on the extent the federal and state university library management adopt the UNESCO conservation guidelines preservation practices.

13. There is no significant difference on the extent the federal and state university library management adopt the UNESCO conservation guidelines restoration practices.

14. There is significant difference on the extent the federal and state university library staff adopt the UNESCO conservation guidelines preservation practices.

15. There is significant difference on the extent the federal and state university library staff adopt the UNESCO conservation guidelines restoration practices.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS

In this chapter, the discussion of results, conclusion, implications of the study, recommendations, limitations and suggestions for further research are presented.

Discussion of Findings

Results are discussed based on the following subheading:

Extent of awareness of the university library management of the UNESCO Conservation Guidelines preservation practices.

Extent of awareness of the university library management of the UNESCO Conservation Guidelines restoration practices..

University library staff awareness of the UNESCO Conservation Guidelines; preservation practices.

University library staff awareness of the UNESCO Conservation Guidelines; restoration practices.

Extent of adoption of the university library management of the UNESCO Conservation Guidelines preservation practices;

Extent of adoption of the university library management of the UNESCO Conservation Guidelines restoration practices.

Extent of adoption of the university library staff of the UNESCO Conservation Guidelines preservation practices

Extent of adoption of the university library staff of the UNESCO Conservation Guidelines restoration Practices.

Extent of Awareness of the University Library Management of the UNESCO Conservation Guidelines Preservation Practices.

The findings of this study indicated that few of the library management 20(43.5%) are aware of the UNESCO conservation guidelines preservation practices to a very high extent while 20(43.5%) of the library management are aware of them to high extent.This finding might have been as a result of their level of education and long years of training, conferences and workshops attended by the university library managers both local and International. Although the management might not actually practice the preservation practices indicated in the UNESCO Conservation Guidelines but are aware of its content to an extent. The findings of this study supported the findings of Olatokun (2008) which affirmed that librarians engaged in conservation which involves the preservation activities.

With regards to the hypothesis tested in this work, it was observed that there is no significant difference on the extent federal and state university library management are aware of the UNESCO Conservation Guidelines preservation practices.

Extent of Awareness of the University Library Management of the UNESCO Conservation Guidelines Restoration Practices

The findings of this study revealed that only 9(19.6%) of the library management are aware of the UNESCO conservation guidelines restoration practices   to a very high extent while 27(58.7%) of the library management

are aware of them to high extent. The possible reason for their high level of awareness could be due to long years of training, conferences and workshops of the university library management in the areas of the restoration materials. Although the management might not actually practice the restoration practices indicated in the UNESCO Conservation Guidelines but are aware of its content to an extent. The findings of this study supported the findings of Olatokun (2008) which affirmed that Librarians engaged in conservation practices which involves the restoration activities.

With regards to the hypothesis, the result shows that the second null hypothesis was accepted. This means that there is no significant difference on the extent federal and state university library management are aware of the UNESCO Conservation Guidelines restoration practices.

University Library Staff Awareness of the UNESCO Conservation Guidelines Preservation Practices.

The findings showed that most of the university library staff 178(66.0%) are aware of the UNESCO conservation guidelines preservation practices to a moderate extent.The moderate extent of the UNESCO Conservation Guidelines preservation practices might be due to non-provision of the materials to the library staff by the library management coupled with the low knowledge of the library staff on the possibilities of those practices in reducing the life span of the papers when it is not in line with the UNESCO Conservation Guidelines. The result of the findings of this study aligned with

the findings by Ovowoh & Iwhiwhu (2010) who found out that library staff are observing preservation practices but not in line with UNESCO Conservation Guidelines.

With regards to the third hypothesis the null hypothesis was rejected. This means that there is significant difference on the extent federal and state university library staff are aware of the UNESCO conservation guidelines preservation practices.

University Library Staff Awareness of the UNESCO Conservation Guidelines Restoration Practices.

 The findings revealed that   most of the university library staff 171(63.3%) are aware of the UNESCO conservation guidelines restoration practices to a moderate extent.

This shows that the university library staff is aware of the UNESCO Conservation Guidelines restoration practices to a moderate extent. The findings of this study could be as a result of the fact that the university library staff was not provided with the restoration materials by the university library management because the provision of those restoration materials shows that the library staff are aware of them. This is because the awareness of the library staff are dependent on the awareness of the library managers. This equally shows that the restoration practices of the library staff in south East University libraries are not in line with the UNESCO Conservation Guidelines instead they observe rule of the thumbs practices. The result of the findings of

this study aligned with the findings by Ovowoh and Iwhiwhu (2010) who found out that library staff are observing some restoration practices but not in line with the UNESCO Conservation Guidelines.

With regards to the fourth hypothesis the result shows that the null hypothesis was rejected. This means that there is significant difference on the extent the federal and state university library management are aware of the UNESCO conservation guidelines restoration practices.

UNESCO Conservation Guidelines Preservation Practices adopted by University library Management.

The findings revealed that the few of the university library management 24(52.2%) adopted the UNESCO Conservation Guidelines preservation practices to a very high extent while 16(34.8%) of the library management adopt them to high extent.According to this result, the university library management adoption is not in line with the UNESCO Conservation Guidelines preservation practices. This is because the library management has been observing a related preservation practices. The result of this study negates the findings of the Ogbodo (2011) who found out that preservation practices are not being followed in a polytechnic. However, the scope of the present study is in the university which implicates that the reverse of what happens in the universities could be what is obtainable in the polytechnics.

With regards to the fifth hypothesis the result shows that the null hypothesis was accepted. This means that there is no significant difference on

the extent the federal and state university library management on the extent they adopted the preservation practices in the UNESCO conservation guidelines.

UNESCO Conservation Guidelines Restoration Practices adopted by University Library Management

The findings indicated that only 9(19.6%) of the university library management adopt restoration practices in the UNESCO Conservation Guidelines to very high extent while 27(58.7%) of the university library management adopt them to high extent.

The result of this study shows that only few of the library management adopt the restoration practices to a high extent. From this result it is obvious that library management' restoration practices is not in line with UNESCO conservation Guidelines. More so the moderate extent of library staff in adopting the restoration practices according to UNESCO Conservation Guidelines shows that Library management does not adopt the Guideline in their restoration practices. The result of this study negates the findings of the Ogbodo (2011) who found out that restoration practices are not being followed in a polytechnic. However, the scope of the present study is in the university which implicates that the reverse of what happens in the universities could be what is obtainable in the polytechnics.

With regards to the 6th hypothesis, the result shows that the the sixth null hypothesis was accepted. This means that there is no significant

difference on the extent the federal and state university library management o adopt the UNESCO Conservation Guidelines restoration practices. .

UNESCO Conservation Guidelines Preservation Practices adopted by University Library Staff in South east, Nigeria.

The findings shows that few of the library staff 129(47.8%) adopt preservation practices in the UNESCO Conservation Guidelines to moderate extent while 99(36.6) of the library staff adopt them to high extent. This might be due to non-provision of the materials to the library staff by the library management coupled with the low knowledge of the library staff on the possibilities of those practices in reducing the life span of the papers when it is not in line with the UNESCO Conservation Guidelines. The findings of this study aligned with the findings by Ovowoh and Iwhiwhu (2010) who found out that library staff are observing preservation practices but not in line with UNESCO Conservation Guidelines. The result shows that the seventh null hypothesis was rejected. This means that there is significant difference on the extent the federal and state university library staff adopts the preservation practices in the UNESCO Conservation Guidelines.

UNESCO Conservation Guidelines Restoration Practices adopted by University Library Staff in South-East Nigeria.

With reference to the research question eight which dealt with the UNESCO Conservation Guidelines restoration practices adopted by university library staff in South-East Nigeria. The result of the findings revealed that most of the library staff 153(56.7%) adopt the UNESCO Conservation

Guidelines restoration practices to moderate extent.This shows that the university library staff adopts the UNESCO Conservation Guidelines restoration practices to a moderate extent. The findings of this study could be as a result of the fact that the library staff were not provided with the restoration materials by the library management because the provision of those restoration materials for their practices shows that the library staff adopts them. This is because the adoptions of the library staff are dependent on the adoption of the university library management. This equally shows that the restoration practices of the library staff in South East university libraries are not in line with the UNESCO Conservation Guidelines.

With regards to the eight hypothesis, the result shows that the eight null hypothesis was rejected. This means that there is significant difference on the extent the federal and state university library staff adopt the restoration practices in the UNESCO Conservation Guidelines.

Conclusion

In conclusion, library management are aware of the UNESCO Conservation Guidelines to a high extent. Also most Library staff are aware of the preservation practices in UNESCO Conservation Guidelines to moderate extent. Library management are aware of the UNESCO Conservation Guidelines restoration practices to a high extent. Most of the library staff are aware of the UNESCO Conservation Guidelines restoration practices to a moderate extent. Library management adopt preservation and restoration practices in the UNESCO Conservation Guidelines to high extent.

Also, most library staff adopts the UNESCO Conservation Guidelines preservation and restoration practices to moderate extent.

Implications of the Study

The results of this study have some obvious implications. It has provided empirical evidence as regards the extent of awareness and adoption of UNESCO Conservation Guidelines among the university library management and staff in the South-Eastern Nigerian universities.

The findings reveal that library management is aware of the UNESCO Conservation Guidelines preservation practices to a high extent. Also, most of the library staff are aware of the UNESCO Conservation Guidelines preservation practices to a moderate extent.This obviously has implication for the conservation practices. First, it is a threat to national Heritage. This means that our heritage is at risk because from the result it means that library management and staff are not following UNESCO Conservation Guidelines in their preservation and restoration practices. Since these practices are daily routine in the library, the high level of awareness by university library management may be as a result of their level of education.

Furthermore, the findings reveal that the university library management awareness and adoption of the UNESCO Conservation Guidelines restoration practices is to a high extent. Also, most of the library staff awareness and adoption of the UNESCO Conservation Guidelines restoration practices is to a moderate extent. The implication is that deterioration of library materials will be on the increase because restoration practices are not adopted effectively. Secondly, acquisition of library materials will be a mere waste of time since the materials will not be properly conserved for posterity. Also vital information resources are lost with the implication that user's information needs may not be met and future use of such resources are permanently hampered and posterity are denied of the valuable information materials.

It is expected that almost all university library management and staff level of adoption should be high extent but it is not like that and that is an indication that Conservation Guidelines by UNESCO is not being used by management and staff of university libraries in the South- East.

Recommendations

On the basis of the findings of this study, the conclusion drawn and its educational implications, the following recommendations are made:

1. Government should conduct workshops, seminars and conferences for university library management and staff on the UNESCO Conservation Guidelines to enable them acquire more and balanced knowledge needed in using the UNESCO Conservation Guidelines.
2. The university should provide an enabling environment to help the university library management and staff work effectively and use the UNESCO Conservation Guidelines in their preservation practices.
3. There should be adequate funding of conferences and seminars by the government for staff improvement.

Limitations of the Study

1. The questionnaire used for this study might be faked by some respondent or even been subjective instead of being objective.

2. Financial Challenge is the major limitation of this study.

3. Distance and distraction.

In spite of the limitation pointed above, the study has been able to point out the extent of awareness and adoption of UNESCO Conservation Guidelines by University Library Managers and Staff. Also the numbers of the responses were good enough for meaningful generalization of the result.

Suggestions for Further Studies

Based on the findings of the study, the researcher suggests further research be

Undertaken in such areas as:

1. Awareness and adoption of preservation and restoration of digital resources using UNESCO Conservation Guidelines in Nigeria

2. Awareness and adoption of UNESCO Conservation Guidelines in Nigeria using a documented analysis.

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APPENDIX A

UNESCO CONSERVATION GUIDELINES

Introduction

The purpose of this Guideline is to provide archivists and Librarians, especially those concerned with planning, commissioning and managing conservation services, with a summary of guidelines which they can apply in selecting and introducing those which are most appropriate to their own situations. Based on this study, the guidelines to be used for this work will be in two parts: preservation guidelines and Restoration guidelines. In the area of preservation, the Guideline stipulates Good Housekeeping practices in terms of Cleaning and dusting, removal of deleterious components, Flattening, Packing. Handling, Inspection, and Pest Control practices such as Treatment of premises and Treatment of affected documents. In the area of restoration, the Guidelines provides for basic principles for restoration and repair, fumigation, Deacidification, Lamination, Encapsulation. Bindings and shelving.

According to UNESCO, ICA and IFLA (2000), the summary of the UNESCO Conservation Guidelines are as follows:

1. Preservation guidelines

2. Restoration guidelines

 PRESERVATION GUIDELINES Includes:

I.   Good Housekeeping practices. This involves the following:

- Cleaning. The removal of dust and dirt from documents and their containers on their reception in the archives and libraries, and regular, preferably annual, cleaning thereafter, will contribute to the maintenance of dust-free storage areas. Chemical cleaning or bleaching should not be undertaken by non-conservation staff; materials should always be carefully tested before chemicals are applied to ascertain that no harm will result as a consequence.

To ensure the protection of the collections against particulate pollutants, a regular and sustained programme of cleaning should be maintained, undertaken with care and under supervision. Clean surroundings also discourage fungi, insects, and pests. The cleaning programme should include the examination of collections not only to provide early warning of biological or chemical damage but also to observe conditions throughout the area.

Cleaning the floors of storage accommodation and book stacks may be left to non-specialized staff under instructions to respect the collections and not to touch library material or shelves. Directions should be given to retrieve pieces of bindings, record slips, etc., from the floor (noting where they were found). Library material on the shelves should only be cleaned by properly trained members of staff. It is important to provide appropriate materials and equipment which remove rather than redistribute dirt and dust. Cleaning cloths to which particulates adhere rather than dusters which merely spread them around in different places should be used to clean library fittings. Floors

should be vacuum cleaner (notswept) and damp-mopped once a week. Cleaning agents must be nontoxic and pose no threat to the collections from solvent fumes or abrasives. Products containing oil, chlorine, alum, peroxides, and ammonia should be avoided. .

• Removal of deleterious components: Corrodible metallic components, such as staples, pins and paper clips should be removed. Files which are held on 'tags " lengths of cord with solid ends which thread through the contents of files and attach them to file covers) should have any tags with corrodible ends replaced by others with plastic ends; files in pillar (or post) binders with corrodible pillars should be removed from those binders and placed in new ones with inert pillars. Chemically active components with archival significance e.g. photographs, acidic file covers) should be removed and stored separately or placed within inert polyester sleeves. The removal of pressure-sensitive tape requires the careful use of solvents and should not be attempted by non-conservation staff.

No attempt should be made to separate documents that are attached with lines or dots of paste or glue. If such items must be separated to allow for the safe handling, use, or filming of the records, a conservator should be contacted.

In removing Staples or Paper Fasteners, records are often stapled or otherwise fastened together in order to preserve their order. The unity of such groups of records must be recognized; however from a preservation perspective the fasteners used to affix records together can be highly damaging. Many metal

fasteners, such as straight pins, staples, paper clips and tags, rust over time, and they and other fasteners can cut or tear papers. Rubber bands harden and can become stuck to the surface of papers; they also can leave acids on the documents. Strings and ribbons can also be acidic and can cut into documents. If the ties are coloured the colours can run into the papers leaving permanent stains. Adhesives such as glues or tapes can leave acidic stains and will weaken papers eventually.

It is important to remove such fasteners carefully and to ensure the order of the records is not damaged or placed at risk. If metal fasteners can be removed by hand without causing damage, they should be taken off. Staple removers will damage papers and should not be used; instead it is best to use a thin dull knife or spatula to loosen the ends of the staples or slip paper clips off. If rust is left it can be chipped away with the knife or spatula as long as the chipping does not damage the objects themselves. Rubber bands may also be removed by hand, and if they are hardened they can be chipped away gently using a spatula or dull knife. Ribbons and strings can be removed and discarded. Adhesives are difficult to remove and require solvents. It is best not to attempt removal of adhesives without additional advice or guidance. Once fasteners have been removed, it is possible to replace them with appropriate fasteners, if it is important to keep the records together. Staples of any kind, including rust-proof staples, are not recommended, as they leave holes and damage materials.

Brittle or weak papers should not be attached with any fastener; instead they can be grouped together into separate folders if keeping them in order is critical. It is also possible to number the back corners of each sheet sequentially, using a soft lead pencil, so that the order may be maintained. Photographs should never be clipped together in any way, as the clips will damage the surface of the photograph, leaving permanent damage.

- Flattening. Folded papers should be opened and held flat by pressing or by humidification and tying between acid-free boards after interleaving with white blotting paper, never by the direct application of a domestic laundry iron. In cleaning and flattening, an experienced sub-professional or a trainee conservator, working under supervision, could handle 200 sheets of paper a day.

- Packing. Any repacking should be in acid-free materials. The use of acid-free storage boxes and folders for loose papers and files and of boxes for bound volumes has been shown to extend the life of documents stored within them and should be seriously considered. They provide a good level of protection against fire, flood, light, vermin, pollution and cycling of environmental conditions in the storage area. Where acid-free boxes are not available, boxing will still provide protection, but documents should be wrapped in acid-free paper or folders as a protection against acid migration or wrappers tied with undyed broad cotton tape (not string or cord) may be recommended.

• Handling. Procedures for the careful handling of documents by staff and users should be introduced and enforced. These will include:

a. provision of archival trolleys which support documents adequately and are manoeuverable; Use book trolleys that:

- have large rubber wheels, for this helps stability, and manoeuvrability, and reduces vibration

- have wide shelves or protective rails to secure stacks the items in transit

- have bumpers on corners to minimize damage from inadvertent bumps.

When putting books on trolleys ensure that:

- they are shelved upright on the trolley and are properly supported as in the

- volumes do not protrude beyond the edges of the trolley

- the trolley is loaded so that it has a low centre of gravity.

b. avoiding stacking documents on trolleys, desks, floors, etc;

providing adequate working surfaces for staff and users and, where necessary, properly constructed book-rests or cradles; and

c. controlling the handling of documents when being photocopied.-Inspection. Storage areas should be inspected regularly to ensure that storage and environmental conditions are adequate and that there has been no infestation by fungi, micro- organisms, insects or vermin.

II.   Pest Control Practices in terms of Preventing Insect and Pest Infestations

It is now accepted that an integrated pest management (IPM) approach should form part of every preservation programme. IPM involves:

-     monitoring the building regularly for the presence of insects and pests

-     ensuring all staff, from cleaners to librarians, are vigilant and report any signs of fresh damage and activity

-     checking all material which is to be accessioned before it enters the library

-     using sticky traps. Traps have the advantage of catching insects before they

can be found visually; they catch a wide range of species; they can be placed in areas which are difficult to inspect; trapped insects can be identified and counted;

-     traps are good indicators of an increase in insect numbers in one area; they

also highlight any failure of control treatment

-     understanding the biology and life cycles of insects and pests, which helps to know when and where they are likely to breed, what they are likely to eat, where they are likely to live eliminating or containing all sources of likely infestation – ideally food and drink should not be

consumed on the premises; flowers and plants should not be allowed in the building

- maintaining an environment not conducive to pests and insects, which is clean, cool, dry, and well-ventilated

- preventing pests and insects from entering the building – making sure

- doors close properly, installing mesh screens for windows and doors, etc.,

- using appropriate exterior lighting, such as sodium vapor, which is less attractive to insects

- implementing a cleaning and hygiene programme – rubbish should be safely

and properly disposed of; attics and basements regularly checked and cleaned.

III. Treatment of premises. Where fungi, micro-organisms, insects or vermin are an inherent problem within the storage areas, regular steps should be taken to treat the affected documents by cleaning, disinfestation, etc. to clean and disinfect the area (aerosol sprays should not be used - they will spread the infestation) and to eradicate the cause of the infestation, e.g. improving the environment (i.e. lowering the temperature and relative humidity), repairing broken windows or damaged screens. Food and drink should never be brought into storage areas (or, ideally, into the archives and libraries). Documents

should not be replaced in the area until the source of the infestation has been eliminated.

- Routine treatment of new accessions. Where fungi, micro-organisms or insects are an endemic environmental problem, it is desirable to eliminate them before documents are placed in storage by an appropriate method of disinfestation. However, this will be ineffective if the area into which they will subsequently be placed is already infested or provides conditions which encourage a recurrence of the problem.

- Treatment of infestations. Where an infestation of fungi, micro-organisms, insects or vermin is discovered, immediate steps should be taken to treat the affected documents by cleaning, disinfestation, etc. to clean and disinfect the area (aerosol sprays should not be used - they will spread the infestation) and to eradicate the cause of the infestation, e.g. improving the environment (i.e. lowering the temperature and relative humidity), repairing broken windows or damaged screens. Food and drink should never be brought into storage areas (or, ideally, into the archive). Documents should not be replaced in the area until the source of the infestation has been eliminated.

2. Restoration Guidelines which includes:

Basic principles of restoration and repair. The whole process of restoration and repair may defeat its own object unless the true nature of archival materials and the treatments which may be applied to them are fully understood and those treatments conform to certain basic principles:

- No process may be used in restoration which would remove, diminish, falsify (by subtraction, alteration or addition) or obscure in any way the document's value as evidence. This applies not only to the written text of the document but also to its physical structure, when that itself has evidential value.

- No process may be used which would in any way damage or weaken the document.

From these stem three further principles:

a) As far as possible missing material should be replaced by material of the same kind, or with compatible, similar materials.

b) The nature and extent of any repair should be left unmistakeably evident. However, this does not mean that the repair should not be aesthetically similar to the original.

c) Nothing should be done which cannot be undone without damage to the document. However, this does not mean that certain treatments, e.g. cleaning and deacidification, which would never be reversed in practice, should not be

used when they are appropriate. A balance has to be struck between the possible effects of any treatment and the durability of the document if it is left untreated and this may justify in appropriate instances the use of irreversible processes, e.g. copolymerisation.

Methods of treatment. Considerable uncertainty exists as to the best - restoration. methods of disinfestation. Those which have been employed are: i.Fumigation, which requires a special fumigation chamber and appropriate chemicals; thymol, long a preferred chemical, is now considered to be of limited effectiveness and ethylene oxide is explosive when mixed with air and requires a properly designed and maintained vacuum chamber for its use and very careful handling also its reaction and decomposition produces by-products which are both toxic and injurious to certain documentary materials; , this is no more than the full-time job of one sub-professional with special training in the health and safety aspects; the limiting factor will be the size of the chamber and the availability of the necessary chemicals.

ii. Deacidification. Traditional paper repair will not of itself remedy the effects of acid deterioration. This can only be done by neutralising the acid and building in an alkaline buffer by chemical means (excessive alkalinity may also damage paper and a pH level of more than 9.0 should not be sought). Deacidification should not be undertaken before inks and pigments have been

tested for fastness in the substance to be used and, if they are not fast, have been fixed. A number of techniques of 21deacidification have been developed:

a)   aqueous deacidification, in which affected paper is immersed in (fragile documents should be supported), or brushed with, an alkaline solution or suspension (magnesium bicarbonate is generally regarded as the most effective) until the acidity has been neutralised and the pH value has been raised to between 7.5 and 9.0; after treatment any necessary repair is then undertaken and the paper is re-sized and pressed; this method is tried and tested, but may not be safe for very fragile documents; it is also a very slow process;

b)   spirit deacidification is similar to aqueous deacidification except that the alkali is dissolved or suspended in an organic solvent; it can be applied in spray form, which speeds up the process, though it may not be as effective as immersion;

c)   vapour-phase deacidification employs chemicals in gaseous forms to neutralise the acid; this is potentially easier to use and offers greater productivity than either of the immersion processes, but unfortunately most of the gases which have been used are poisonous or otherwise injurious to health and this system is not now recommended;

d)   mass deacidification methods are being developed in a number of countries but are still in the experimental or developmental stage.

All require expensive plant; some require the use of a vacuum chamber, which may be safe for bound volumes but not always for loose sheets; others use chemicals which require careful handling if they are not to be a threat to health and safety. Most are likely to be cost-effective only where a high volume of work can be foreseen (42).

iii .Lamination. The earliest, and still the most common, mass treatment system for repairing paper documents is lamination. This may be undertaken by semi-skilled staff after a minimum of training. sub-professionals can achieve a rate of 80 to 100 sheets a day using solvent lamination techniques, or up to 130 sheets a day using a manual or semi-automatic lamination machine;   However, it adds to the bulk of a document and it contradicts to some extent two of the principles of repair: that like or compatible materials should be used in repair, and that the repair should be readily reversible. It may be of two kinds:

• machine lamination, in which the sheet of paper to be repaired is placed between two layers of tissue coated with a thermoplastic adhesive (alternatively separate sheets of the thermoplastic adhesive may be placed between the document and two sheets of uncoated tissue), and heat and pressure is applied to cause the sandwich to adhere (thus contradicting another principle of repair: that nothing should be done which is potentially damaging to the document); the Barrow process is not recommended as it may damage

the documents to which it is applied; certainly some early examples of this treatment have deteriorated badly, although it appears that in at least some cases it is untreated inherent acidity of the paper, accelerated by the treatment, which has led to this deterioration; the basic rule for machine lamination must be, therefore, always test for acidity first and deacidify if necessary before lamination; the Postlip-Duplex (or Langwell) process uses lower heats and pressures and the tissue which it uses is a cellulose fibre and can be removed if necessary, but sufficient doubt about the life of laminated paper exists for the process to be recommended only for low value, high use documents .

 b) manual lamination is a similar process in which heat is not applied, two main variations are employed:

  i.   florentine repair, in which the sandwich is Japanese tissue, a very fine, translucent paper, and the adhesive is a standard paper repair paste; this type of repair may also be undertaken with machine lamination; and

  ii.   spirit lamination, a process developed at the National Archives of India in Delhi, but not widely accepted, in which the sandwich is cellulose acetate film and tissue paper, adhesion being provided from the chemical action of acetone which is applied evenly over the surface with a non-linting cloth. A lamination machine, either a small hand press or a larger semi-automatic or automatic model;

iii. Encapsulation. As an alternative to lamination which will support a document without the application of heat, pressure or adhesive, the technique of encapsulation has been developed. Here the document is encased in an envelope of inert transparent polyester film e.g. 'Mylar'). As with lamination it is necessary to deacidify before encapsulation. Ready-made envelopes may be used for less fragile documents, but for weak and friable items it is necessary to build up the envelope around the document. Early encapsulation techniques made use of double-sided adhesive tape, but it was found that there was a potential risk of the document slipping into the adhesive. Heat sealing also placed the document at risk (though newer systems used in the USA appear to be safe), but ultrasonic welding appears to provide a safe sealing system. A cheaper alternative is machine-sewing the polyester sheets together with a zigzag stitch. Only a minimum of skill and training is required to undertake this process, which may take longer than lamination and adds more to the bulk of the document. Another major problem is the tendency for electrostatic attraction to lift friable or flaking inks and pigments and for these to adhere to the polyester film; encapsulation should not be used for such materials. Encapsulation may be used to preserve archival materials other than paper e.g. photographs, textiles) and to isolate degrading materials interfiled with other documents.

iv.   Bindings: The repair or replacement of bindings is rarely cost-effective unless the original binding has historical, aesthetic or other intrinsic value and interest or the document which it encases is of high value and interest. Where the repair or replacement of a binding appears justified on such grounds, the old binding should be disassembled only so far as is necessary to repair any damage to its contents, and restored in exactly the same style and materials as the original. Such work requires high levels of skill and experience, far beyond those of the standard library bindery. It also takes considerable time and cannot be rushed.

The traditional method of securing loose papers to make them easier to handle and to protect them against theft or misplacement is to bind them into volumes. Since such papers rarely come in identical sizes and in neat gatherings like the sheets of printed books, here also a level of skills and experience higher than those of the standard library bindery is required. Special techniques, such as packing to make up for smaller sized sheets and to assist the volume to open properly, have to be learned. Cropping pages to provide neat edges should never take place. This work is time consuming and labour intensive. Where adequate margins have not been left, especially on the reverse sides, the text may disappear into the gutter and be difficult to read. An alternative method of perfect binding using modern adhesives and standard cases has been employed in some archives. This can be semi-mechanical and does not require highly skilled operators. It is, however, doubtful whether the

volumes so created will stand up to the test of time or frequent handling for consultation and copying. In China and Japan a style of binding is practised in which writing is on one side of each sheet of paper; this is then folded back and volumes are made up by threading through the margins of the doubled sheets.

vi. Shelving and the Shelving of Books

Shelving used to store books must be non-combustible and non-deteriorating, preferably made of rust-proof metal such as steel. The shelving should be adjustable to accommodate boxes and bundles in a variety of different sizes and to allow maximum use of the shelf space available.

- Shelving should be designed to provide smooth, secure, clean, and convenient support. Shelves should be kept away from water pipes, ventilation outlets and lighting fixtures.

- Any protrusions and sharp edges should be attended to. Ideally, book cases should be constructed of steel with a baked enamel finish.

- Volumes should be shelved a minimum of 10 cm off the floor to reduce the risk of damage from flooding or passers-by. When possible, use shelving units that have a 'canopy' on top, as this will deflect water, dust, and some damaging light.

- Good air circulation should be maintained in storage areas and around shelving. Shelves should not be placed against outside walls, as this

limits the circulation of air and can leave materials exposed to leaking walls or external elements.

- Book cases should be at least 5 cm away from walls and the books another 5 cm away from the back of the book case. This is especially important when book cases are positioned against the outside walls of a building.

- When books are stored in steel cabinets, ensure the cabinets are adequately ventilated. Holes should be in the sides and not on the top of the cabinets to avoid dust and debris falling on the books.

- Books kept on mobile shelving must be shelved carefully to avoid any possibility of them falling off or being crushed when the shelves are moved. For the maximum protection of books, the following rules should be enforced:

- Shelve books so that they are not difficult to remove or replace. Books which are tightly shelved will soon be damaged when they are removed or replaced.

- e bookends to support books when shelves are not full. Allowing books to lean will distort and strain the structures and eventually cause their breakdown.

- Bookends should have smooth surfaces and broad edges to prevent covers from being abraded and leaves torn or creased.

- Do not let books extend beyond the edges of shelves into aisles because they can be damaged by passers-by and trollies.

- Shelve books by size whenever possible. Avoid keeping large books next to small ones because the large book will be inadequately supported.

- Box, or at least separate with a piece of card or board, bindings with metal furniture (clasps, bosses, studs, etc.), which are shelved next to unprotected books.

vii. Photocopying: Photocopying raises serious preservation issues. Flat-bed photocopiers and poor handling can cause severe damage to the structure of books and documents.

Photocopy machines specifically designed for bound material and not office photocopiers should be provided. Overhead photocopiers, which allow a book to be copied face-up, are ideal but expensive. Ideally, photocopying should be carried out by the library's own fully trained staff, with each item being examined for its suitability. The criteria for restricting certain material and copyright regulations must be thoroughly understood by all staff members. Training sessions in good handling practice and good copying practice should be mandatory for all new staff, with refresher sessions for existing staff at frequent periods. If it is not possible to allocate staff to carry out copying, there are some factors which can help to reduce wear and tear:

- Position the machines where they are within clear sight of staff.

- Post clear and concise guidelines on careful handling prominently by the machines. It is worth considering posters illustrating that the spine of a book should never be pressed down with the hand or the cover of the copier to ensure a good quality image.

- Make criteria for restricting material clear to users and discourage practices such as photocopying an item for the sake of a few sentences.

- Keep a record of what has been photocopied so that items which are frequently requested can be microfilmed.

The following material should not be photocopied:

   fragile or damaged items.

- tightly-bound volumes.

- rare books and photographs.

- books stapled or stitched through the sides.

- fine bindings.

- vellum and parchment.

- items with seals attached.

- perfect bindings (books which rely on adhesive to keep the pages together and are not sewn).

- oversize items that would have to be excessively manipulated to obtain acomplete image.

Adequate ventilation should be provided which reduces exposure of staff and library material to ozone.

Never leave material on photocopy machines. If a book is too brittle to photocopy safely, it should be microfilmed instead and a photocopy made from the film copy. http://www.unesco.org/webworld/ramp/html/r8904e/r8904e08.ht

APPENDIX B

UNIVERSITIES IN THE SOUTH -EAST ZONE OF NIGERIA

S/N	Universities	Number of Library Managers	Number of Library Staff
1	Abia State University, Uturu.	6	27
2	Anambra State University,	8	31

	Uli.		
3	Ebonyi State University, Abakaliki.	9	140
4	Enugu State University of Science and Technology, Enugu.	10	34
5	Federal University of Nduaforalake, NdufuIfo, Ebonyi State.	2	7
6	Federal University of Technology, Owerri,	9	115
7	Imo State University Owerri	8	21
8	Michael Okpara University of Agriculture Umudike, Abia State	7	45
9	NnamdiAzikiwe University Awka Anambra State	10	74
10	University of Nigeria Nsukka, Enugu State.	12	129
	Total	*81*	*623*

APPENDIX C

Department of Library and Information Science.

Faculty of Education, Nnamdi Azikiwe University,

Awka, Anambra State, Nigeria.

25/3/2015

Dear Respondent,

I am a doctoral Student of the above named university conducting a research titled: "Extent of awareness and adoption of UNESCO Conservation Guidelines by University Library Management and Staff in the South -East Nigeria.

I humbly solicit your kind assistance to complete the attached questionnaire below, assuring you that it will be used purely for research purpose alone.

Thanks for your anticipated cooperation.

Yours sincerely,

Chima-James, Ngozi.

QUESTIONNAIRE FOR UNIVERSITY LIBRARY MANAGEMENT

Please answer the following questions by either a tick (√) in the appropriate box or by writing in the space provided where applicable. Thanks.

SECTION A: Demographic Information

1. Status of university: Federal ☐ State ☐

2. Rank:

University Librarian to senior Librarian ☐

Librarian 1 to Graduate Assistant ☐

Library officers to Supervisors….☐

Library Assistant to library Attendants ☐

SECTION B

UNIVERSITY LIBRARY MANAGEMENT EXTENT OF AWARENESS OF THE UNESCO CONSERVATION GUIDELINES PRESERVATION PRACTICES SCALE.

Please, tick (√) as appropriate based on the preservation practices you are aware of in your university library as a library manager for conservation purposes. The listed preservation practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which you are aware of these highlighted preservation practices.

Key: *VHE = Very High Extent   HE = High Extent*

ME = Moderate Extent   LE = Low Extent

VLE = Very Low Extent

S/N	As a university library management, please indicate the extent you are aware of the following preservation practices:	VHE	HE	ME	LE	VLE
1.	Provision of acid-free storage boxes for storing loose papers.					
2.	Provision of acid-free folders for storing files.					
3.	Regular inspection of the storage areas.					
4.	Usage of integrated pest management (IPM) approach for pest control.					
5.	Encouragement of staff to be vigilant and report any signs of fresh damage and activity.					
6.	Restriction of foods and drinks into the library premises.	`				
7.	Placing of restriction on bringing flowers and plants into the building.					
8.	Prevention of pests and insects from entering the library by making sure that the doors are properly closed.					
9.	Prevention of pests and insects from entering the library by making sure that mesh screens are installed for windows and doors.					
10.	Repairing of broken windows or damaged screens.					
11.	Installation of air conditioners in the storage areas					
12.	Provision of adequate security to prevent theft, mutilation and vandalism					
13	Usage of adjustable shelves to accommodate boxes					

	and bundles of different sizes.					

SECTIONC

UNIVERSITY LIBRARY MANAGEMENT EXTENT OF AWARENESS OF THE UNESCO CONSERVATION GUIDELINES RESTORATION PRACTICES SCALE.

Please, tick (√) as appropriate based on the restoration practices you are aware of in your University Library as a university library management for Conservation purposes. The listed restoration practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which you are aware of these highlighted restoration practices.

Key: *VHE = Very High Extent   HE = High Extent   ME = Moderate Extent   LE = Low Extent   VLE = Very Low Extent*

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a university library Management please indicate the extent to which you are aware of each of the following restoration practices:					
1.	Provision of thymol					
2.	Provision of ethylene oxide					
3.	Provision of special fumigation chamber.					
4.	Purchase of magnesium bicarbonate					

5.	Provision of ultrasonic welding equipment					
6.	Acquisition of rust-proof metal shelves such as steel.					
7	Repair of wooden shelves.					
8	Provision of overhead photocopiers.					
9	Provision of flat-bed photocopiers.					
10.	Aqueous deacidification by immersing affected paper in a magnesium bicarbonate solution.					
11.	Spirit deacidification by immersing affected materials in an organic solvent.					
12.	Provision of adjustable Shelves.					
13.	Installation of air conditioners					

SECTION D

UNIVERSITY LIBRARY MANAGEMENT EXTENT OF ADOPTION OF THE UNESCO CONSERVATION GUIDELINES PRESERVATION PRACTICES SCALE

Please, tick (√) as appropriate based on the preservation practices you adopt in your University library as a library management for Conservation purposes. The listed preservation practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which you have adopted these highlighted preservation practices.

Key: *VHE = Very High Extent*   *HE = High Extent*

ME = Moderate Extent   *LE = Low Extent*

VLE = Very Low Extent

S/N	As a university library management please indicate the extent you adopt each of the following preservation practices:	VHE	HE	ME	LE	VLE
1	Provision of acid-free storage boxes for storing loose papers.					
2.	Provision of acid-free folders for storing files.					
3.	Regular inspection of the storage areas.					
4.	Usage of integrated pest management (IPM) approach for pest control.					
5.	Encouragement of staff to be vigilant and report any signs of fresh damage and activity.					
6.	Restriction of foods and drinks into the library premises.	`				
7.	Placing of restriction on bringing flowers and plants into the building.					
8.	Prevention of pests and insects from entering the library by making sure that the doors are properly closed.					
9.	Prevention of pests and insects from entering the library by making sure that mesh screens are installed for windows and doors.					
10.	Repairing of broken windows or damaged screens.					
11.	Installation of air conditioners in the storage areas					
12.	Provision of adequate security to prevent theft, mutilation and vandalism					
13.	Usage of adjustable shelves to accommodate boxes and bundles of different sizes.					

SECTION E

UNIVERSITY LIBRARY MANAGEMENT EXTENT OF ADOPTION OF THE UNESCO CONSERVATION GUIDELINES RESTORATION PRACTICE SCALE.

Please, tick (√) as appropriate based on the restoration practices you adopt in your library as a university library management for Conservation purposes. The listed restoration practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which you have adopted these of the highlighted restoration practices.

Key: *VHE = Very High Extent   HE = High Extent   ME = Moderate Extent   LE = Low Extent   VLE = Very Low Extent*

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a university library Management, please indicate the extent you adopt each of the following restoration practices:					
1.	Provision of thymol					
2.	Provision of ethylene oxide					
3.	Provision of special fumigation chamber.					
4.	Purchase of magnesium bicarbonate					
5.	Provision of ultrasonic welding equipment					

6.	Acquisition of rust-proof metal shelves such as steel.					
7.	Repair of wooden shelves.					
8.	Provision of overhead photocopiers.					
9.	Provision of flat-bed photocopiers.					
10.	Aqueous deacidification by immersing affected paper in a magnesium bicarbonate solution.					
11.	Spirit deacidification by immersing affected materials in an organic solvent.					
12.	Provision of adjustable Shelves.					
13.	Installation of air conditioners					

Thank you for sparing your time to fill out this questionnaire.

QUESTIONNAIRE FOR UNIVERSITY LIBRARY STAFF

Please answer the following questions by either a tick (√) in the appropriate box or by writing in the space provided where applicable. Thanks.

SECTION A

Demographic Information

1. Status of university: ☐ Federal   ☐ State

2. Rank:

University Librarian to Senior Librarian ☐

Librarian 1 to Graduate Assistant ☐

Library officers to Supervisors ☐

Library Assistant to library Attendants ☐

SECTION B

UNIVERSITY LIBRARY STAFF UNESCO CONSERVATION GUIDELINES PRESERVATION PRACTICES AWARENESS SCALE

Please tick (√) as appropriate based on the preservation practices that you are aware of as a library staff. The listed preservation practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be known by each library staff. Please indicate the extent to which you are aware of these highlighted preservation practices.

Key: *VHE = Very High Extent   HE = High Extent   ME = Moderate Extent   LE = Low Extent   VLE = Very Low Extent*

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a library staff, please indicate the extent you are aware of each of the following UNESCO Conservation Guidelines preservation practices:					
1.	Cleaning books with chemical					
2.	Cleaning books with dusters					

3.	Cleaning books with clothes that are adhesive					
4.	Vacuum cleaning the floor for dust removal					
5.	Weekly floor mopping					
6.	Sweeping of the floor					
7.	Removal of staples, pins and paper clips from paper and records.					
8.	Separation of documents that are attached with lines, dots of paste or glue.					
9.	Storage of loose papers with acid-free storage boxes.					
10	Storage of files with acid-free folders.					
11	Regular inspection of storage areas.					

SECTION C

UNIVERSITY LIBRARY STAFF UNESCO CONSERVATION GUIDELINE RESTORATION PRACTICES AWARENESS SCALE

Please tick (√) as appropriate based on the UNESCO Conservation Guidelines restoration practices that you are aware of as a library staff. The listed restoration practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be known by each library staff. Please indicate the extent to which you are aware of these of the highlighted restoration practices.

Key: *VHE = Very High Extent   HE = High Extent   ME =*

Moderate Extent   LE = Low Extent

VLE = Very Low Extent

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a library staff, please indicate the extent you are aware of each of the following restoration practices:					
1.	Fumigation of library with chemical (thymol)					
2.	Fumigation of library with chemical (ethyleneoxide)					
3.	Fumigation using special fumigation chamber.					
4.	Aqueous deacidification by immersing affected paper in an alkaline solution (magnesium bicarbonate)					
5.	Aqueous deacidification by brushing an affected paper with, an alkaline solution (magnesium bicarbonate)					
6.	Spirit deacidification by immersing the affected paper in alkali dissolved or suspended in an organic solvent.					
7.	Spirit deacidification by spraying the alkali solution at affected material.					
8.	Mass deacidification by the use of a vacuum chamber for bound volumes only.					
9.	Lamination of paper documents.					
10.	Lamination with machine by testing for acidity first and deacidify before lamination.					
11.	Manual lamination by employing florentine repair.					

12.	Manual repair by employing spirit lamination.					
13.	Encapsulation with an envelope of inert transparent polyester film like 'Mylar'.					
14.	Encapsulation by ultrasonic welding					
15.	Encapsulation by heat sealing					
16.	Bindings by restoring the document in exactly the same style and materials as the original.					
17.	Book storage with rust-proof metal shelves such as steel (non-combustible and non-deteriorating).					
18.	Book storage with wooden shelves.					
19.	Shelving with a minimum distance of 15 cm off the floor					
20.	Usage of adjustable shelves to allow maximum use of the shelf space available.					
21.	Shelve books so that they are not difficult to remove or replace to avoid damage.					
22.	Photocopying with overhead photocopiers.					
23.	Photocopying with flat-bed photocopiers.					
24.	Photocopying of fragile materials.					

SECTION D

UNIVERSITY LIBRARY STAFF EXTENT OF ADOPTION OF UNESCO CONSERVATION GUIDELINES PRESERVATION PRACTICES SCALE

Please tick (√) as appropriate based on the preservation practices you adopt in your library as a library staff. The listed preservation practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which your university library has adopted these of the highlighted preservation practices.

Key: *VHE = Very High Extent HE = High Extent ME = Moderate Extent*

LE = Low Extent   VLE = Very Low Extent

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a library staff, please indicate the extent you adopt each of the following preservation practices:					
1.	Cleaning books with chemical					
2.	Cleaning books with dusters					
3.	Cleaning books with clothes that are adhesive					
4.	Vacuum cleaning the floor for dust removal					
5.	Weekly floor mopping					
6.	Sweeping of the floor					
7.	Removal of staples, pins and paper clips from paper and records.					
8.	Separation of documents that are attached with lines, dots of paste or glue.					
9.	Storage of loose papers with acid-free storage boxes.					
10	Storage of files with acid-free folders.					

11	Regular inspection of storage areas.					

SECTION E

UNIVERSITY LIBRARY STAFF EXTENT OF ADOPTION OF UNESCO RESTORATION PRACTICES SCALE

Please tick (√) as appropriate based on the restoration practices you adopt in your library as a library staff. The listed restoration practices are those that are recommended in the UNESCO Conservation Guidelines as those that should be observed by each library. Please indicate the extent to which you have adopted these of the highlighted restoration practices.

Key: *VHE = Very High Extent   HE = High Extent   ME = Moderate*

Extent   LE = Low Extent   VLE =

Very Low Extent

S/N	ITEMS	VHE	HE	ME	LE	VLE
	As a library staff, please indicate the extent you adopt each of the following restoration practices:					
1.	Fumigation of library with chemical (thymol)					
2.	Fumigation of library with chemical (ethyleneoxide)					
3.	Fumigation using special fumigation chamber.					
4.	Aqueous deacidification by immersing affected paper in an alkaline solution (magnesium bicarbonate)					
5.	Aqueous deacidification by brushing an affected paper with, an alkaline solution (magnesium bicarbonate)					
6.	Spirit deacidification by immersing the affected paper in alkali dissolved or suspended in an organic solvent.					
7.	Spirit deacidification by spraying the alkali solution at affected material.					
8.	Mass deacidification by the use of a vacuum chamber for bound volumes only.					

9.	Lamination of paper documents.					
10.	Lamination with machine by testing for acidity first and deacidify before lamination.					
11.	Manual lamination by employing florentine repair.					
12.	Manual repair by employing spirit lamination.					
13.	Encapsulation with an envelope of inert transparent polyester film like 'Mylar'.					
14.	Encapsulation by ultrasonic welding					
15.	Encapsulation by heat sealing					
16.	Bindings by restoring the document in exactly the same style and materials as the original.					
17.	Book storage with rust-proof metal shelves such as steel (non-combustible and non-deteriorating).					
18.	Book storage with wooden shelves.					
19.	Shelving with a minimum distance of 10 cm off the floor					
20.	Usage of adjustable shelves to allow maximum use of the shelf space available.					
21.	Shelve books so that they are not difficult to remove or replace to avoid damage.					
22.	Photocopying with overhead photocopiers.					
23	Photocopying with flat-bed photocopiers.					
24	Photocopying of fragile materials.					

Thank you for sparing your time to fill out this questionnaire.

APPENDIX D

RELIABILITY

Cronbach's Alpha Reliability Test for QUESTIONNAIRE FOR UNIVERSITY LIBRARY MANAGEMENT (QULIBM)

The CORR Procedure: 52 Variables:

Variable Label	N	Mean	Std Dev	Sum	Minimum	Maximum
M_AW_PP_1 M_AW_PP_1	20	4.35000	0.98809	87.00000	2.00000	5.00000
M_AW_PP_2 M_AW_PP_2	20	4.20000	0.89443	84.00000	2.00000	5.00000
M_AW_PP_3 M_AW_PP_3	20	4.60000	0.59824	92.00000	3.00000	5.00000
M_AW_PP_4 M_AW_PP_4	20	4.30000	1.08094	86.00000	1.00000	5.00000
M_AW_PP_5 M_AW_PP_5	20	4.55000	0.60481	91.00000	3.00000	5.00000
M_AW_PP_6 M_AW_PP_6	20	4.75000	0.44426	95.00000	4.00000	5.00000
M_AW_PP_7 M_AW_PP_7	20	4.10000	1.07115	82.00000	1.00000	5.00000
M_AW_PP_8 M_AW_PP_8	20	4.40000	0.75394	88.00000	2.00000	5.00000
M_AW_PP_9 M_AW_PP_9	20	4.40000	1.09545	88.00000	1.00000	5.00000
M_AW_PP_10 M_AW_PP_10	20	4.35000	1.08942	87.00000	1.00000	5.00000
M_AW_PP_11 M_AW_PP_11	20	4.65000	0.74516	93.00000	2.00000	5.00000
M_AW_PP_12 M_AW_PP_12	20	4.60000	0.94032	92.00000	2.00000	5.00000
M_AW_PP_13 M_AW_PP_13	20	4.10000	1.07115	82.00000	1.00000	5.00000
M_AW_RP_1 M_AW_RP_1	20	3.75000	0.96655	75.00000	2.00000	5.00000
M_AW_RP_2 M_AW_RP_2	20	3.85000	0.93330	77.00000	2.00000	5.00000
M_AW_RP_3 M_AW_RP_3	20	4.25000	0.85070	85.00000	2.00000	5.00000
M_AW_RP_4 M_AW_RP_4	20	4.00000	1.12390	80.00000	1.00000	5.00000
M_AW_RP_5 M_AW_RP_5	20	3.70000	1.17429	74.00000	1.00000	5.00000

M_AW_RP_6	20	4.35000	0.81273	87.00000	2.00000
5.00000 M_AW_RP_6					
M_AW_RP_7	20	4.05000	1.19097	81.00000	1.00000
5.00000 M_AW_RP_7					
M_AW_RP_8	20	3.95000	1.05006	79.00000	1.00000
5.00000 M_AW_RP_8					
M_AW_RP_9	20	3.85000	1.03999	77.00000	1.00000
5.00000 M_AW_RP_9					
M_AW_RP_10	20	3.75000	1.20852	75.00000	1.00000
5.00000 M_AW_RP_10					
M_AW_RP_11	20	3.80000	1.23969	76.00000	1.00000
5.00000 M_AW_RP_11					
M_AW_RP_12	20	4.35000	0.81273	87.00000	2.00000
5.00000 M_AW_RP_12					
M_AW_RP_13	20	4.35000	0.81273	87.00000	2.00000
5.00000 M_AW_RP_13					
M_AD_PP_1	20	4.45000	0.51042	89.00000	4.00000	5.00000
M_AD_PP_1					
M_AD_PP_2	20	4.05000	0.22361	81.00000	4.00000	5.00000
M_AD_PP_2					
M_AD_PP_3	20	1.30000	0.47016	26.00000	1.00000	2.00000
M_AD_PP_3					
M_AD_PP_4	20	1.25000	0.44426	25.00000	1.00000	2.00000
M_AD_PP_4					
M_AD_PP_5	20	1.35000	0.48936	27.00000	1.00000	2.00000
M_AD_PP_5					
M_AD_PP_6	20	1.20000	0.41039	24.00000	1.00000	2.00000
M_AD_PP_6					
M_AD_PP_7	20	1.20000	0.41039	24.00000	1.00000	2.00000
M_AD_PP_7					
M_AD_PP_8	20	1.50000	0.51299	30.00000	1.00000	2.00000
M_AD_PP_8					
M_AD_PP_9	20	1.30000	0.47016	26.00000	1.00000	2.00000
M_AD_PP_9					
M_AD_PP_10	20	1.35000	0.48936	27.00000	1.00000
2.00000 M_AD_PP_10					
M_AD_PP_11	20	4.30000	0.47016	86.00000	4.00000
5.00000 M_AD_PP_11					
M_AD_PP_12	20	1.05000	0.22361	21.00000	1.00000
2.00000 M_AD_PP_12					
M_AD_PP_13	20	1.25000	0.44426	25.00000	1.00000
2.00000 M_AD_PP_13					
M_AD_RP_1	20	1.25000	0.44426	25.00000	1.00000
2.00000 M_AD_RP_1					

M_AD_RP_2 2.00000 M_AD_RP_2	20	1.20000	0.41039	24.00000	1.00000
M_AD_RP_3 2.00000 M_AD_RP_3	20	1.35000	0.48936	27.00000	1.00000
M_AD_RP_4 2.00000 M_AD_RP_4	20	1.30000	0.47016	26.00000	1.00000
M_AD_RP_5 2.00000 M_AD_RP_5	20	1.20000	0.41039	24.00000	1.00000
M_AD_RP_6 2.00000 M_AD_RP_6	20	1.20000	0.41039	24.00000	1.00000
M_AD_RP_7 2.00000 M_AD_RP_7	20	1.45000	0.51042	29.00000	1.00000
M_AD_RP_8 2.00000 M_AD_RP_8	20	1.40000	0.50262	28.00000	1.00000
M_AD_RP_9 2.00000 M_AD_RP_9	20	1.45000	0.51042	29.00000	1.00000
M_AD_RP_10 2.00000 M_AD_RP_10	20	1.50000	0.51299	30.00000	1.00000
M_AD_RP_11 2.00000 M_AD_RP_11	20	1.30000	0.47016	26.00000	1.00000
M_AD_RP_12 5.00000 M_AD_RP_12	20	4.30000	0.47016	86.00000	4.00000
M_AD_RP_13 5.00000 M_AD_RP_13	20	4.15000	0.36635	83.00000	4.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.842568
Standardized	0.726136

Appendix D2: Cronbach's Alpha Reliability Test for QUESTIONNAIRE FOR UNIVERSITY LIBRARY STAFF (QULIBS)

The CORR Procedure: 66 Variables:

Variable Label	N	Mean	Std Dev	Sum	Minimum	Maximum
S_AW_PP_1 S_AW_PP_1	30	1.83333	1.05318	55.00000	1.00000	5.00000
S_AW_PP_2 S_AW_PP_2	30	4.16667	1.31525	125.00000	2.00000	5.00000
S_AW_PP_3 S_AW_PP_3	30	1.90000	0.92289	57.00000	1.00000	4.00000
S_AW_PP_4 S_AW_PP_4	30	1.53333	0.57135	46.00000	1.00000	3.00000
S_AW_PP_5 S_AW_PP_5	30	1.53333	0.50742	46.00000	1.00000	2.00000
S_AW_PP_6 S_AW_PP_6	30	1.33333	0.54667	40.00000	1.00000	3.00000
S_AW_PP_7 S_AW_PP_7	30	1.63333	0.80872	49.00000	1.00000	3.00000
S_AW_PP_8 S_AW_PP_8	30	1.73333	0.73968	52.00000	1.00000	3.00000
S_AW_PP_9 S_AW_PP_9	30	2.23333	1.38174	67.00000	1.00000	5.00000
S_AW_PP_10 S_AW_PP_10	30	1.46667	0.50742	44.00000	1.00000	2.00000
S_AW_PP_11 S_AW_PP_11	30	1.80000	0.55086	54.00000	1.00000	3.00000
S_AW_RP_1 S_AW_RP_1	30	1.06667	0.25371	32.00000	1.00000	2.00000
S_AW_RP_2 S_AW_RP_2	30	1.06667	0.25371	32.00000	1.00000	2.00000
S_AW_RP_3 S_AW_RP_3	30	1.26667	0.44978	38.00000	1.00000	2.00000
S_AW_RP_4 S_AW_RP_4	30	1.30000	0.46609	39.00000	1.00000	2.00000
S_AW_RP_5 S_AW_RP_5	30	1.13333	0.34575	34.00000	1.00000	2.00000
S_AW_RP_6 S_AW_RP_6	30	1.16667	0.37905	35.00000	1.00000	2.00000

S_AW_RP_7	30	1.13333	0.34575	34.00000	1.00000	2.00000
S_AW_RP_7						
S_AW_RP_8	30	1.16667	0.37905	35.00000	1.00000	2.00000
S_AW_RP_8						
S_AW_RP_9	30	1.10000	0.30513	33.00000	1.00000	2.00000
S_AW_RP_9						
S_AW_RP_10	30	1.16667	0.37905	35.00000	1.00000	2.00000
S_AW_RP_10						
S_AW_RP_11	30	1.23333	0.43018	37.00000	1.00000	2.00000
S_AW_RP_11						
S_AW_RP_12	30	1.03333	0.18257	31.00000	1.00000	2.00000
S_AW_RP_12						
S_AW_RP_13	30	1.10000	0.30513	33.00000	1.00000	2.00000
S_AW_RP_13						
S_AW_RP_14	30	1.13333	0.34575	34.00000	1.00000	2.00000
S_AW_RP_14						
S_AW_RP_15	30	1.10000	0.30513	33.00000	1.00000	2.00000
S_AW_RP_15						
S_AW_RP_16	30	1.03333	0.18257	31.00000	1.00000	2.00000
S_AW_RP_16						
S_AW_RP_17	30	1.06667	0.25371	32.00000	1.00000	2.00000
S_AW_RP_17						
S_AW_RP_18	30	4.06667	0.25371	122.00000	4.00000	5.00000
S_AW_RP_18						
S_AW_RP_19	30	1.03333	0.18257	31.00000	1.00000	2.00000
S_AW_RP_19						
S_AW_RP_20	30	4.23333	0.77385	127.00000	1.00000	5.00000
S_AW_RP_20						
S_AW_RP_21	30	3.93333	0.25371	118.00000	3.00000	4.00000
S_AW_RP_21						
S_AW_RP_22	30	1.20000	0.40684	36.00000	1.00000	2.00000
S_AW_RP_22						
S_AD_PP_1	30	1.56667	0.62606	47.00000	1.00000	3.00000
S_AD_PP_1						
S_AD_PP_2	30	3.93333	0.25371	118.00000	3.00000	4.00000
S_AD_PP_2						
S_AD_PP_3	30	1.70000	0.74971	51.00000	1.00000	3.00000
S_AD_PP_3						
S_AD_PP_4	30	1.53333	0.57135	46.00000	1.00000	3.00000
S_AD_PP_4						
S_AD_PP_5	30	1.53333	0.50742	46.00000	1.00000	2.00000
S_AD_PP_5						
S_AD_PP_6	30	1.33333	0.54667	40.00000	1.00000	3.00000
S_AD_PP_6						

S_AD_PP_7	30	1.63333	0.80872	49.00000	1.00000	3.00000
S_AD_PP_7						
S_AD_PP_8	30	1.73333	0.73968	52.00000	1.00000	3.00000
S_AD_PP_8						
S_AD_PP_9	30	1.56667	0.62606	47.00000	1.00000	3.00000
S_AD_PP_9						
S_AD_PP_10	30	1.46667	0.50742	44.00000	1.00000	2.00000
S_AD_PP_10						
S_AD_PP_11	30	1.80000	0.55086	54.00000	1.00000	3.00000
S_AD_PP_11						
S_AD_RP_1	30	1.60000	0.56324	48.00000	1.00000	3.00000
S_AD_RP_1						
S_AD_RP_2	30	1.46667	0.50742	44.00000	1.00000	2.00000
S_AD_RP_2						
S_AD_RP_3	30	2.06667	0.69149	62.00000	1.00000	3.00000
S_AD_RP_3						
S_AD_RP_4	30	2.03333	0.85029	61.00000	1.00000	4.00000
S_AD_RP_4						
S_AD_RP_5	30	1.53333	0.86037	46.00000	1.00000	5.00000
S_AD_RP_5						
S_AD_RP_6	30	1.40000	0.72397	42.00000	1.00000	4.00000
S_AD_RP_6						
S_AD_RP_7	30	1.33333	0.54667	40.00000	1.00000	3.00000
S_AD_RP_7						
S_AD_RP_8	30	1.50000	0.73108	45.00000	1.00000	3.00000
S_AD_RP_8						
S_AD_RP_9	30	1.46667	0.68145	44.00000	1.00000	4.00000
S_AD_RP_9						
S_AD_RP_10	30	1.43333	0.67891	43.00000	1.00000	4.00000
S_AD_RP_10						
S_AD_RP_11	30	1.80000	0.96132	54.00000	1.00000	5.00000
S_AD_RP_11						
S_AD_RP_12	30	1.56667	0.81720	47.00000	1.00000	5.00000
S_AD_RP_12						
S_AD_RP_13	30	1.33333	0.47946	40.00000	1.00000	2.00000
S_AD_RP_13						
S_AD_RP_14	30	1.40000	0.67466	42.00000	1.00000	4.00000
S_AD_RP_14						
S_AD_RP_15	30	1.43333	0.67891	43.00000	1.00000	4.00000
S_AD_RP_15						
S_AD_RP_16	30	1.50000	0.57235	45.00000	1.00000	3.00000
S_AD_RP_16						
S_AD_RP_17	30	1.50000	0.50855	45.00000	1.00000	2.00000
S_AD_RP_17						

S_AD_RP_18   30   4.00000   0   120.00000   4.00000   4.00000
S_AD_RP_18
S_AD_RP_19   30   1.53333   0.50742   46.00000   1.00000   2.00000
S_AD_RP_19
S_AD_RP_20   30   4.10000   0.30513   123.00000   4.00000
5.00000 S_AD_RP_20
S_AD_RP_21   30   4.06667   0.25371   122.00000   4.00000
5.00000 S_AD_RP_21
S_AD_RP_22   30   1.60000   0.67466   48.00000   1.00000   3.00000
S_AD_RP_22

Cronbach Coefficient Alpha

Variables   Alpha

Raw   0.805152
Standardized   0.703413

APPENDIX E

SPSS DATA OUTPUT

[DataSet0] C:\Users\Documents\CHIMA JAMES LIB MANAGEMENT.sav

Frequency Table

OWNERSHIP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FEDERAL	26	56.5	56.5	56.5
	STATE	20	43.5	43.5	100.0
	Total	46	100.0	100.0	

AWARENESSOFPRESERVATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30.00	1	2.2	2.2	2.2
	31.00	1	2.2	2.2	4.3
	35.00	1	2.2	2.2	6.5
	37.00	1	2.2	2.2	8.7
	38.00	1	2.2	2.2	10.9
	39.00	1	2.2	2.2	13.0
	49.00	1	2.2	2.2	15.2
	50.00	2	4.3	4.3	19.6
	51.00	1	2.2	2.2	21.7
	52.00	3	6.5	6.5	28.3
	53.00	3	6.5	6.5	34.8
	54.00	1	2.2	2.2	37.0
	55.00	3	6.5	6.5	43.5
	56.00	2	4.3	4.3	47.8
	57.00	2	4.3	4.3	52.2
	58.00	2	4.3	4.3	56.5
	59.00	3	6.5	6.5	63.0
	60.00	4	8.7	8.7	71.7
	61.00	2	4.3	4.3	76.1
	62.00	2	4.3	4.3	80.4
	63.00	2	4.3	4.3	84.8
	64.00	4	8.7	8.7	93.5
	65.00	3	6.5	6.5	100.0
	Total	46	100.0	100.0	

AWARENESSOFRESTORATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26.00	1	2.2	2.2	2.2
	33.00	2	4.3	4.3	6.5
	38.00	2	4.3	4.3	10.9
	39.00	1	2.2	2.2	13.0
	41.00	1	2.2	2.2	15.2
	42.00	1	2.2	2.2	17.4
	43.00	1	2.2	2.2	19.6
	45.00	1	2.2	2.2	21.7
	46.00	3	6.5	6.5	28.3
	47.00	1	2.2	2.2	30.4
	48.00	1	2.2	2.2	32.6
	49.00	1	2.2	2.2	34.8
	50.00	3	6.5	6.5	41.3
	51.00	1	2.2	2.2	43.5
	52.00	6	13.0	13.0	56.5
	53.00	3	6.5	6.5	63.0
	55.00	3	6.5	6.5	69.6
	56.00	1	2.2	2.2	71.7
	57.00	1	2.2	2.2	73.9
	58.00	3	6.5	6.5	80.4
	59.00	2	4.3	4.3	84.8
	62.00	2	4.3	4.3	89.1
	64.00	1	2.2	2.2	91.3
	65.00	4	8.7	8.7	100.0
	Total	46	100.0	100.0	

ADOPTIONOFPRECERVATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31.00	1	2.2	2.2	2.2
	35.00	1	2.2	2.2	4.3
	38.00	2	4.3	4.3	8.7
	39.00	1	2.2	2.2	10.9
	45.00	1	2.2	2.2	13.0
	49.00	2	4.3	4.3	17.4
	50.00	2	4.3	4.3	21.7
	51.00	1	2.2	2.2	23.9
	52.00	2	4.3	4.3	28.3
	54.00	1	2.2	2.2	30.4
	55.00	3	6.5	6.5	37.0
	56.00	1	2.2	2.2	39.1
	57.00	2	4.3	4.3	43.5
	58.00	2	4.3	4.3	47.8
	59.00	3	6.5	6.5	54.3
	60.00	3	6.5	6.5	60.9
	61.00	2	4.3	4.3	65.2
	62.00	1	2.2	2.2	67.4
	63.00	6	13.0	13.0	80.4
	64.00	3	6.5	6.5	87.0
	65.00	6	13.0	13.0	100.0
	Total	46	100.0	100.0	

ADOPTIONOFRESTORATION

		Frequency	Percent	Valid Percent	Cumulative Percent
	26.00	1	2.2	2.2	2.2
	33.00	1	2.2	2.2	4.3
	35.00	1	2.2	2.2	6.5
	38.00	3	6.5	6.5	13.0
	41.00	1	2.2	2.2	15.2
	42.00	1	2.2	2.2	17.4
	43.00	1	2.2	2.2	19.6
	45.00	1	2.2	2.2	21.7
	46.00	3	6.5	6.5	28.3
	47.00	2	4.3	4.3	32.6
	48.00	2	4.3	4.3	37.0
Valid	49.00	1	2.2	2.2	39.1
	50.00	2	4.3	4.3	43.5
	51.00	1	2.2	2.2	45.7
	52.00	9	19.6	19.6	65.2
	53.00	2	4.3	4.3	69.6
	55.00	3	6.5	6.5	76.1
	56.00	1	2.2	2.2	78.3
	57.00	1	2.2	2.2	80.4
	59.00	2	4.3	4.3	84.8
	62.00	1	2.2	2.2	87.0
	65.00	6	13.0	13.0	100.0
	Total	46	100.0	100.0	

t-Test

[DataSet0] C:\Users\Documents\CHIMA JAMES LIB MANAGERS.sav

	OWNERSHIP	N	Mean	Std. Deviation
AWARENESSOFPRESERVATION	FEDERAL	26	56.0385	9.09277
	STATE	20	53.4500	9.08136
AWARENESS OF RESTORATION	FEDERAL	26	51.3462	9.27768
	STATE	20	50.7500	9.12991
ADOPTION OF PRESERVATION	FEDERAL	26	57.6538	8.78609
	STATE	20	54.3000	8.71236
ADOPTION OF RESTORATION	FEDERAL	26	49.5385	7.53249
	STATE	20	52.0500	10.70895

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
AWARENESS OF PRESERVATION	Equal variances assumed	.958	44	.343	2.58846
AWARENESS OF RESTORATION	Equal variances assumed	.218	44	.829	.59615
ADOPTION OF PRECERVATION	Equal variances assumed	1.288	44	.204	3.35385
ADOPTION OF RESTORATION	Equal variances assumed	-.934	44	.355	-2.51154

Frequencies

[DataSet0] C:\Users\Documents\CHIMA JAMES LIB.STAFF.sav

Frequency Table
OWNERSHIP

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid FEDERAL	164	60.7	60.7	60.7
STATE	106	39.3	39.3	100.0
Total	270	100.0	100.0	

AWARENESSOFPRESERVATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10.00	1	.4	.4	.4
	13.00	1	.4	.4	.7
	15.00	1	.4	.4	1.1
	16.00	1	.4	.4	1.5
	18.00	2	.7	.7	2.2
	20.00	4	1.5	1.5	3.7
	21.00	2	.7	.7	4.4
	22.00	2	.7	.7	5.2
	23.00	1	.4	.4	5.6
	24.00	2	.7	.7	6.3
	25.00	1	.4	.4	6.7
	26.00	5	1.9	1.9	8.5
	27.00	11	4.1	4.1	12.6
	28.00	12	4.4	4.4	17.0
	29.00	15	5.6	5.6	22.6
	30.00	12	4.4	4.4	27.0
	31.00	16	5.9	5.9	33.0
	32.00	23	8.5	8.5	41.5
	33.00	14	5.2	5.2	46.7
	34.00	28	10.4	10.4	57.0
	35.00	17	6.3	6.3	63.3
	36.00	15	5.6	5.6	68.9
	37.00	8	3.0	3.0	71.9
	38.00	18	6.7	6.7	78.5
	39.00	13	4.8	4.8	83.3
	40.00	12	4.4	4.4	87.8
	41.00	7	2.6	2.6	90.4
	42.00	9	3.3	3.3	93.7
	43.00	4	1.5	1.5	95.2

		Frequency	Percent	Valid Percent	Cumulative Percent
	44.00	4	1.5	1.5	96.7
	45.00	2	.7	.7	97.4
	46.00	2	.7	.7	98.1
	47.00	3	1.1	1.1	99.3
	50.00	2	.7	.7	100.0
	Total	270	100.0	100.0	

AWARENESSOFRESTORATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40.00	1	.4	.4	.4
	42.00	1	.4	.4	.7
	43.00	2	.7	.7	1.5
	44.00	2	.7	.7	2.2
	45.00	2	.7	.7	3.0
	46.00	2	.7	.7	3.7
	48.00	2	.7	.7	4.4
	50.00	4	1.5	1.5	5.9
	52.00	1	.4	.4	6.3
	54.00	3	1.1	1.1	7.4
	56.00	3	1.1	1.1	8.5
	57.00	3	1.1	1.1	9.6
	58.00	6	2.2	2.2	11.9
	59.00	3	1.1	1.1	13.0
	60.00	7	2.6	2.6	15.6
	61.00	4	1.5	1.5	17.0
	62.00	6	2.2	2.2	19.3
	63.00	3	1.1	1.1	20.4
	64.00	8	3.0	3.0	23.3
	65.00	4	1.5	1.5	24.8
	66.00	7	2.6	2.6	27.4
	67.00	7	2.6	2.6	30.0
	68.00	5	1.9	1.9	31.9
	69.00	11	4.1	4.1	35.9
	70.00	11	4.1	4.1	40.0
	71.00	11	4.1	4.1	44.1
	72.00	9	3.3	3.3	47.4
	73.00	6	2.2	2.2	49.6

	Frequency	Percent	Valid Percent	Cumulative Percent
74.00	5	1.9	1.9	51.5
75.00	10	3.7	3.7	55.2
76.00	6	2.2	2.2	57.4
77.00	10	3.7	3.7	61.1
78.00	6	2.2	2.2	63.3
79.00	8	3.0	3.0	66.3
80.00	11	4.1	4.1	70.4
81.00	3	1.1	1.1	71.5
82.00	7	2.6	2.6	74.1
83.00	6	2.2	2.2	76.3
85.00	9	3.3	3.3	79.6
86.00	3	1.1	1.1	80.7
87.00	3	1.1	1.1	81.9
88.00	7	2.6	2.6	84.4
89.00	8	3.0	3.0	87.4
90.00	3	1.1	1.1	88.5
92.00	1	.4	.4	88.9
93.00	6	2.2	2.2	91.1
94.00	2	.7	.7	91.9
95.00	6	2.2	2.2	94.1
96.00	3	1.1	1.1	95.2
97.00	1	.4	.4	95.6
98.00	3	1.1	1.1	96.7
99.00	2	.7	.7	97.4
100.00	1	.4	.4	97.8
101.00	2	.7	.7	98.5
105.00	1	.4	.4	98.9
107.00	3	1.1	1.1	100.0
Total	270	100.0	100.0	

ADOPTIONOFPRECERVATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11.00	17	6.3	6.3	6.3
	12.00	2	.7	.7	7.0
	16.00	1	.4	.4	7.4
	20.00	1	.4	.4	7.8
	21.00	1	.4	.4	8.1

		Frequency	Percent	Valid Percent	Cumulative Percent
	22.00	4	1.5	1.5	9.6
	24.00	2	.7	.7	10.4
	26.00	2	.7	.7	11.1
	27.00	4	1.5	1.5	12.6
	28.00	3	1.1	1.1	13.7
	29.00	1	.4	.4	14.1
	30.00	7	2.6	2.6	16.7
	31.00	9	3.3	3.3	20.0
	32.00	11	4.1	4.1	24.1
	33.00	20	7.4	7.4	31.5
	34.00	9	3.3	3.3	34.8
	35.00	13	4.8	4.8	39.6
	36.00	17	6.3	6.3	45.9
	37.00	16	5.9	5.9	51.9
	38.00	23	8.5	8.5	60.4
	39.00	17	6.3	6.3	66.7
	40.00	11	4.1	4.1	70.7
	41.00	12	4.4	4.4	75.2
	42.00	6	2.2	2.2	77.4
	43.00	17	6.3	6.3	83.7
	44.00	11	4.1	4.1	87.8
	45.00	8	3.0	3.0	90.7
	46.00	5	1.9	1.9	92.6
	47.00	5	1.9	1.9	94.4
	48.00	5	1.9	1.9	96.3
	49.00	2	.7	.7	97.0
	50.00	1	.4	.4	97.4
	51.00	5	1.9	1.9	99.3
	55.00	2	.7	.7	100.0
	Total	270	100.0	100.0	

ADOPTIONOFRESTORATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22.00	18	6.7	6.7	6.7
	36.00	1	.4	.4	7.0
	39.00	1	.4	.4	7.4
	40.00	2	.7	.7	8.1

41.00	3	1.1	1.1	9.3
43.00	1	.4	.4	9.6
44.00	1	.4	.4	10.0
45.00	2	.7	.7	10.7
46.00	2	.7	.7	11.5
47.00	1	.4	.4	11.9
48.00	2	.7	.7	12.6
50.00	2	.7	.7	13.3
51.00	2	.7	.7	14.1
52.00	2	.7	.7	14.8
53.00	1	.4	.4	15.2
54.00	5	1.9	1.9	17.0
55.00	4	1.5	1.5	18.5
56.00	4	1.5	1.5	20.0
57.00	5	1.9	1.9	21.9
58.00	10	3.7	3.7	25.6
59.00	4	1.5	1.5	27.0
60.00	5	1.9	1.9	28.9
61.00	2	.7	.7	29.6
62.00	6	2.2	2.2	31.9
63.00	10	3.7	3.7	35.6
64.00	5	1.9	1.9	37.4
65.00	10	3.7	3.7	41.1
66.00	9	3.3	3.3	44.4
67.00	10	3.7	3.7	48.1
68.00	12	4.4	4.4	52.6
69.00	4	1.5	1.5	54.1
70.00	5	1.9	1.9	55.9
71.00	10	3.7	3.7	59.6
72.00	6	2.2	2.2	61.9
73.00	11	4.1	4.1	65.9
74.00	1	.4	.4	66.3
75.00	9	3.3	3.3	69.6
76.00	5	1.9	1.9	71.5
77.00	9	3.3	3.3	74.8
78.00	4	1.5	1.5	76.3
79.00	4	1.5	1.5	77.8
80.00	3	1.1	1.1	78.9
81.00	8	3.0	3.0	81.9

82.00	1	.4	.4	82.2
83.00	4	1.5	1.5	83.7
84.00	11	4.1	4.1	87.8
85.00	2	.7	.7	88.5
86.00	2	.7	.7	89.3
87.00	1	.4	.4	89.6
88.00	3	1.1	1.1	90.7
89.00	3	1.1	1.1	91.9
90.00	8	3.0	3.0	94.8
91.00	3	1.1	1.1	95.9
92.00	1	.4	.4	96.3
93.00	2	.7	.7	97.0
94.00	1	.4	.4	97.4
95.00	1	.4	.4	97.8
97.00	2	.7	.7	98.5
100.00	1	.4	.4	98.9
102.00	3	1.1	1.1	100.0
Total	270	100.0	100.0	

t-Test

[DataSet0] C:\Users\Documents\CHIMA JAMES LIB.STAFF.sav

		OWNERSHIP	N	Mean	Std. Deviation
AWARENESS OF PRESERVATION	OF	FEDERAL	164	32.2378	5.45237
		STATE	106	35.9151	6.74448
AWARENESS OF RESTORATION	OF	FEDERAL	164	70.8537	12.43449
		STATE	106	79.1698	13.78990
ADOPTION OF PRECERVATION	OF	FEDERAL	164	34.8293	7.61868
		STATE	106	37.2170	11.07464
ADOPTION OF RESTORATION	OF	FEDERAL	164	64.6341	15.24404

		106	69.82 08	20.20787
STATE				

Independent Samples Test

		t-test for Equality of Means			
		t	Df	Sig. (2-tailed)	Mean Difference
AWARENESS OF PRESERVATION	Equal variances assumed	-4.924	268	.000	-3.67729
AWARENESS OF RESTORATION	Equal variances assumed	-5.140	268	.000	-8.31615
ADOPTION OF PRECERVATION	Equal variances assumed	-2.098	268	.037	-2.38771
ADOPTION OF RESTORATION	Equal variances assumed	-2.397	268	.017	-5.18661