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## Conservation and Preservation of Information Resources For Improved Service Delivery in Francis Idachaba Library, Joseph Sarwuam Tarka University Makurdi Nigeria

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**CONSERVATION AND PRESERVATION OF INFORMATION RESOURCES  
FOR IMPROVED SERVICE DELIVERY IN FRANCIS IDACHABA LIBRARY,  
JOSEPH SARWUAN TARKA UNIVERSITY MAKURDI NIGERIA.**

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## **INTRODUCTION**

University libraries are created to serve their parent institution; they help those institutions that created them to achieve their aim. University libraries even though are dependent institutions, are created to promote general and practical education in Nigeria as a whole. University library is the core of the academic activities, where all pertinent information and materials are collected, organized, preserved for easy retrieval and purposeful exploitation in a continuous process of information dissemination. Babalola (2007) stated that “the fundamental role of the library is educational which should be operated as a dynamic instrument of education”. In view of this, Odetoyinbo (2012) also asserts that academic library is a building, a service point, a material, an instructional and self-development Centre which operates as an integral part of the entire school environment”, the primary purpose of the academic library is not only to provide books, journals and other instructional materials in support of the academic programme of the institution, but also to encourage the formation of a life-long habit of reading much and reading well. Therefore, university libraries like any other libraries in education are an information centers, which is no longer an open space but a world where teaching and learning laboratories and recreational reading takes place. The resources of the library ranges from print and non-print resources the print which forms the text books and hard copy journals and other instructional materials in print form, the long lasting nature of the library resources is the hall mark of this research which entails preservation and conservation.

This library provides and maintain means of information that are of interest to their parent institution, university libraries get involved in preparation and publications of books, records report or otherwise as may be desired by their parent bodies. However, the libraries in a bid to meet the set objectives of the universities provide, conserve and preserve a wide range of resources and services, which include monographs, textbooks, reference documents, audio-visual resources and other equipment like computer and internet facilities, current awareness services, abstracting and indexing services and a comfortable reading environment.

University libraries can only achieve their objectives if adequate preservation and conservation practices of informatics resources are made available for the procurement and processing of materials, hiring of personnel, purchase and maintenance of equipment because preservation and conservation is the bedrock of every organization including academic libraries.

Conservation and preservation are essential library activities if properly implemented has the capability of sustaining and promoting library activities for a very long time. Preservation is often used interchangeably with conservation, besides; there is a subtle difference between the two. Preservation suggests that natural resources will be left undisturbed, while conservation usually indicates some resource management.

The process of conservation and preservation are applied to safeguard the information resources from further decay and deterioration. Preservation is the process in which all actions are taken to check and retard deterioration whereas conservation includes proper diagnosis of the decayed information resources, timely curative treatment

and appropriate prevention from further decay. In effect, these two terms could be used interchangeably. In other words, 'conservation' despite the activities which libraries use for the maintenance and sustenance of information resources and facilities which could be human or material, Anjaiah (2008) stresses that the words "preservation and conservation" are often used interchangeably to mean the process of keeping an object safe from harm or loss, damage, destruction or decay and maintaining it in a reasonably sound condition for present and future use. He maintained that these two words are different, though interrelated and overlapping connotations. As a result of this, Harvey (2013) also explained that the terms "preservation and conservation" have been used interchangeably in library literature until the last few years. He maintained that currently, conservation is the more specific term and is particularly used in relation to specific objectives while "preservation" is a broader concept covering conservation as well as actions relating to protection between "preservation and conservation". He further explained that preservation applies to various strategies for preserving the intellectual content while "conservation" is primarily concerned with ensuring that the original artifact is maintained and secure. Similarly, the term to conserve, defend, guard, keep, maintain, sustain among others are synonyms for preservation, preservation of information resources can be seen as the totality of the steps necessary to ensure the permanent accessibility of a particular information resource for posterity, which entails transfer of information to another medium, such as microfilm and electronic material.

Generally, available literature has shown that libraries and their resources are essential tools for education and these resources are generally ephemeral (short life span) and as such because of the constant use they undergo every day in libraries especially in

academic libraries, they are bound to tear and wear. But despite these facts, they are bound to be used, which is why preservation and conservation is imperative. Francis Idachaba Library is established by Joseph Sarwuan Tarkaa University of Agriculture Makurdi and founded by the university, this university have serve the community for a long time since its inception and have had materials worth millions of naira, therefore preservation and conservation of the library resources played a major role in preserving these resources for posterity and future use, in another view the inadequate funding also formed the preservation and conservation activities due to the expensive nature of library resources what is acquired needs to be preserved.

In respect of preservation and conservation of information resources, Francis Idachaba Library has a designed policy for preserving its resources both print and non-prints. As of print the library have a bindery section attached to it, the unit is responsible for receiving and repairing of books that need immediate bindery attention. While the e-resources have automation section with modern technical devices that they use to update, protect and ensure proper back up of the subscribed resources.

Preservation and Conservation practices which are believed to be important to Francis Idachaba library, Joseph Sarwuan Tarka University Makurdi Nigeria, the researcher observed that nine preservation and conservation practices are available in the library under study. The practices available are: clearing and dusting of library resources, Binding, Digitization, photocopying formatting, proper shelving of books to allow free flow of air, provision of enough security personnel to prevent theft and mutilation of library resources, installation of air conditioner in the library and Electronic security system while Regular fumigation is not available in the university.

Subject specialists, bibliographers, and departmental/subject divisional libraries are directly responsible for the intellectual composition of the collection that these staff members are in the best position to know an items intrinsic value to the collection as a whole, and its expected use. Unfortunately, these professionals are often unaware of preservation and conservation options that can protect information resources and prolong their use despite that the preservation and conservation treatment of the collection should be their direct concern since physical access is as critical to patron satisfaction as bibliographic access. preservation and conservation practices does not extend beyond “rare” books, even though irreplaceable items and materials of permanent research value are found on the open shelves of most libraries.

Therefore, there is need for us to preserve and conserve what we have by providing a cover or jacket to the material immediately it arrives, by laminating some of these materials, by binding the materials, by ensuring a regular dusting and clearing of the materials, by ensuring proper handling and maintenance of library resources, by ensuring reformatting-photocopying, micro-films and digitization, by shelving of books for free flow of air, by ensuring adequate security. This can be done using gluing machine, paper cutter, drill machine, computer and printer, microfilm reader, densitometer, magnifying glass, digital scanner, lamination machine, Photostatting machine and many more which are used to conserve and preserve materials in the library and so on for effective service delivery.

Since library materials are composed primarily of organic materials, they are subject to natural deterioration. Most libraries’ collections today are based on paper either in book or sheet form bound volumes, newspapers, serials, manuscripts, maps, water

color, print and drawings. Deterioration of information resources arises from factors such as the quality of environment in which these information resources are stored, the way they are handled, increasing level of usage and process of decay inherent in the materials themselves. Other causes of deterioration of information resources include high temperature level, relative humidity, excessive light, dust and particles, bad shelving, insects, natural disaster and many more.

Edhebe in Fadehan (2009) reported that deterioration of information resources occurs in various form which include brittleness of information resources, stickiness of coated paper based resources and dilution of inks which are caused by high relative humidity, physical breakdown of the information resources, weaken adhesive and rooted leather are caused by heavy usage, sustained fungi and discoloration as well as theft, mutilation and vandalism. There is therefore, an urgent need for active conservation and preservation programme to enhance survival of information resources for effective service delivery.

Preservation and conservation of library materials are done to safeguard the information resources from further decay deterioration and disfiguration. Sule and Ademu cited by Abdulzaq (2015) observed that preservation and conservation practices of information resources leads to the security of man's recorded knowledge. Through the process of preservation and conservation, man has been able to keep intact the records of the past, the present into safe places. These ensure the continued and effective exploitation of resources in any given library. More so, preservation and conservation practices ensure the continued supply of information for research purposes and for posterity. When there is a good preservation and conservation practices on library materials, efforts will not be



a waste on replacement. Materials which should have been expanded on replacement are channeled to the acquisition of new resources to enrich the existing collection. The life span of the collections, books, journals, monographs, audio-visuals, etc. are safeguarded through the instrument of preservation and conservation.

The collection of modern academic libraries such as sound tapes and electronically stored information such as CD-ROMs and computer disc is growing rapidly and most library's collection is essentially impermanent unlike museum items that are rarely handled, library materials are meant to be used. They are vital resources of information which cannot be conserved and stored away in an ideal and secure environment to arrest their decay. The main aim of conservation and preservation is to make information accessible, while still ensuring its ultimate survival.

It is against this backdrop that this study set out to assess conservation and preservation of information resources for improved service delivery in Francis Idachaba library, Joseph Sarwuan Tarka University Makurdi Nigeria.

### **Objectives of the Study**

The main objective of the study was to assess conservation and preservation of information resources for improved service delivery in Francis Idachaba library, Joseph Sarwuan Tara University Makurdi Nigeria. Specifically, the study was to:

1. Assess the information resources that are conserved in Francis Idachaba library, Joseph Sarwan University Makurdi Nigeria

2. Assess the types of deterioration of information resources in Francis Idachaba library, Joseph Saran Tarka University Madurai Nigeria
3. Investigate the methods of conservation and preservation of information resources used in Francis Idachaba library, Joseph Sarwuan Tara University Madurai Nigeria

### **Research Questions**

The following research questions guided the study.

1. What are the types of information resources conserved in Francis Idachaba library, Joseph Sarwuan Tarka University Makurdi?
2. What are the types of deterioration of information resources in Francis Idachaba library, Joseph Sarwuan Tarka University Makurdi?
3. What are the methods of conservation and preservation of information resources used in Francis Idachaba library, Joseph Sarwuan Tarka University Makurdi?

## **LITERATURE REVIEW**

### **Preservation and conservation**

Preservation is occasionally used interchangeably with conservation, particularly outside the professional literature. To Baker and Reitz in Abdulzaq (2015) preservation is the action taken to anticipate, prevent, stop, or slow deterioration. It can be described as the art of anticipating and preventing decay. preservation can also be defined as the majors taken in prolonging the existence of library and archival materials by maintaining them in condition suitable for use either in their original format or in a format more

durable through retention under proper environment conditions or actions taken after a book or collection has been damaged to prevent further deterioration (Abdulzaq20015). International Federation of Library Association (IFLA) (2010) defined preservation to includes: all the managerial and financial considerations, staffing, levels, policies, techniques and methods involved in preserving library and archive materials and information contained in them.

Okapala (2010) maintain that preservation is the action or process of protecting, maintaining, and/or stabilizing the existence materials, form, and integrity of a historic place of an individual component, while protecting its heritage value. Preservation can include both short-term and interim measures to protect or stabilize the place, as well as long-term actions to retard deterioration or prevent damage so that the place can be kept serviceable through routine maintenance and minimal repair, rather than extensive replacement and new construction.

Feather and Sturges in Abdulrazaq (2015) see preservation as the maintenance of collective and individual objects as close as possible to the original condition through appropriate housing, handling, repair and conservation. While Chauhary (2011) state that preservation is a branch of library and information science concerned with maintaining or restoring access to artifacts, documents, and records through the study, diagnosis, treatment and preservation of decay and damage.

According to Ogunmodede and Ebijuwa (2013) is an act of preservation, protecting and shielding materials from destructive influences that shorten their life span.

Chaudhary (2011) view conservation as the treatment and repair of individual items to slow decay or restore them to a usable state.

International Federation of Library Association (IFLA) (2010) defined conservation as specific practices taken to slow down deterioration and prolong the life span of an object by direct intervening in its physical or chemical make-up. Edhebe in Ozioko (2014) notes that conservation as the maintenance of documents in a usable condition through treatment and repairs of individual items to slow the process of decay or to restore them to a usable state. Conservation includes study, diagnosis, preventive care, examination, treatment, documentation using any methods that may prove effective in keeping that property in as close to its original condition as possible and for as long as possible. From the foregoing, one would deduce that conservation is the treatment of information resources to stabilize their physical structure in order to sustain their survival as long as possible in their original format.

### **Type of Information Resources Conserved**

Information resources to Popoola and Haliso (2009) are those information bearing materials that the library collect, store, organize and disseminate to users in order to satisfy their present and future information needs. They are the materials in the library that make services possible. These are the materials which users come to consult, read, or borrow. Information resources are many and varied; they include paper based and machine readable materials. Paper based information resources include books, dictionaries, encyclopedias, journals, newspapers, magazines, vertical files materials, maps and atlases, gazetteers to mention a few while Machine readable materials include CD-ROM,

databases, electronic journals and electronic books, tapes and records, films and many more (Popoola and Haliso, 2009).

Library information resources refer to all those media for storing information such as textbooks, journals, newspapers, and magazines, patents and standards, handbooks and manuals, directories, gazetteers, encyclopedias, atlases and maps, calendars and diaries, vertical files, theses and dissertations, tapes, videos, films, optical discs, cassettes, magnetic tapes among others (IFLA, 2010). Similarly, library information resources can simply be defined as book materials, microforms and electronic information materials capable of meeting information needs of the users (Popoola, 2013). Popoola further submitted that until 1980's, preservation and conservation of library information materials was thought to be relevant to rare book materials by librarians and curators of collection of special materials. But, library information materials are bound to deteriorate or breakdown with time through the aging process, and to replace them may be difficult and expensive if not practically impossible.

Ovowoh and Iwhiwhu (2010) stated that libraries acquire information resources to meet the information and recreational needs of its clientele. It is the responsibility of the library staff to keep these resources in good physical condition to make them available for users at all times. Research has revealed that information resources in many libraries and achieves throughout the country are still housed in conditions that leave much to be desired. A large portion of information recorded on audio or video tape about important events, people, among others has been routinely wiped out in our electronic media houses. Similarly, Abdulrazaq in Ozioko (2015) opines that libraries and archive management must embark on preservation and conservation programmes that will safeguard their

information resources from total deterioration and destruction in order to meet the ever increasing information demands of their users. The legal and social responsibility of libraries and archives makes it imperative for them to preserve and their information resources.

### **Types of Deterioration of Information Resources**

**Brittleness of Information Resources:** Research has confirmed that brittle paper documents are very difficult to repair or bind and most often cannot withstand photocopying and heavy use. Brittleness may result from desiccation caused by high temperature among others. The test for brittleness is fairly simple and objective. Alegbeleye cited by Abdularzaq, (2015) refers to it as the fold endurance test which considers the number of double folding as a measure of brittleness. The book was considered very brittle if it broke after two double folding.

**Discoloration and Staining:** Paper documents over time; get discolored as a result of the interplay of several factors (Walker cited by Adeleke, et al. 2012). The most prominent cause is the reaction of radiant energy with lignin if present in the paper. This darkens the color of the paper, turning it brownish or yellowish. Discoloration results in the reduction of legibility and makes reproduction fairly difficult.

**Human Factor:** Men are the greatest enemies of the materials on which they record their thoughts. To the long list of great libraries vandalized by conquering armies or burned in hate, must be added the incalculable loss and damage by petty, theft, malicious mischief and careless handling by individuals. Improper and faulty actions taken by library staff may cause deterioration to library materials (Ogunmodede and Ebijuwa, 2012). Cheap

and improper materials are often used for mending and repairing. Wrong insecticides are used for fumigation, repairing, restoration and lamination work, which are usually done by untrained personnel. All these are types of deterioration of library materials (Mahapatra and Wamukoya, 2007).

The greatest enemy of information materials is the Librarian or archivist who neglects his collections in the quest for ever more efficient management systems (Adams cited by Adeleke et al, 2012). People pose the most constant threats to library collections. Abuse, whether imposed by library staff or users, intentional or not, results in the same damage and loss of materials. Actions that may be considered abusive include careless or rough handling of brittle paper and fragile bindings, destructive photocopy practices, disfiguring manuscripts with notation or marks, and spilling coffee or ashes on materials, the list of abusive action is endless (Adeleke et al 2012).

While most damage results from carelessness, abusive also include such blatant actions as mutilation, vandalism and theft. Mismanagement falls more specifically within the realm of the librarian, archivist and institutional policies and programme that endanger library and archival materials. Mismanagement relates to housekeeping practices as well as processing, storage and handling procedures that adversely affect the well-being of materials. Inappropriate conservation treatment carried out by unqualified personnel is also an example of mismanagement. Broader examples include institutions having security neither programme nor disaster preparedness plan. The lack of conservation programme that is a fully integrated aspect of library administration contributes as much to the quiet disintegration of material as the zealous application of inappropriate remedies (Adeleke et al, 2012).

## **Methods of Preservation and Conservation of information Resources**

One of the most complex issues facing libraries today is how best to preserve the materials that comprise their collections. Since all library materials are not of equal value, decisions must be made concerning what should be preserved. This process also involves setting priorities and determining of appropriate preservation methods and techniques that will be adopted to prolong the life span of library materials (Lynn cited by Akande, 2009).

Senapi and Nagta cited by Akporhonor, (2011) identify the need to adopt preventive measures in conservation and preservation of library materials and records. These include proper housing of documents, protection against heat, humidity, light, air pollution, dust, insects, fungi, water and mishandling. The author suggests inclusion of conservation and preservation in library education and training. Alegbeleye cited by Anasi, (2010) advocate a preventive conservation and preservation approach in African countries, which should focus on improving the environment, controlling light, temperature, humidity and pollution. There are different methods and techniques librarians and archivists can employ to prolong the life span of materials in their custody. They include:

1. **Care and Handling:** There is the need to educate librarians, archivists and users on the need to handle all library and archival materials with care. It is equally important that the surrounding of the library and archives should be kept clean otherwise known good housekeeping. Anasi (2010), maintained that the practice of good housekeeping is probably the simplest and expensive method of



preventive conservation for any type of information material. There are two aspects to housekeeping. These are, cleaning the building and cleaning the library materials which include the use of vacuuming and dusting. Materials should be prohibited from eating, drinking and smoking in the library.

- 2. Control of Environmental Factors:** One of the most important factors affecting the longevity of library materials is the environment in which these materials stored, used and displayed. In reasoning with the above, Mohammed (2006) states that conducive environment has a profound positive effect on the longevity of every item in the library. In the same vein, Chaudhary (2012) attests that after collection protection, environmental control is the most cost-effective investment in building design to extend service life of the collection. The benefits of extended service life and reduced collection maintenance costs, in addition to considerations of human comfort, often can justify environmental control throughout the library. Control of environmental factors partially begins from selection of site, the planning and the construction of the library building and also the soil on which it will be constructed because these elements have greater impact over the environmental control inside the registry building. It is very important to choose the best architectural design for the registry having cross ventilation facilities for free air circulation within the building. Growth of plants near the building must be avoided, as the roots will damage the building foundation. It is always better to construct the building away from traffic to avoid dust and dirt. Provision of adequate number of electric fans and few exhaust fans will facilitate air circulation inside the library. Sunlight should be prevented from falling directly on papers because the sun is a great emitter of ultraviolet rays (Ogunsola and Ikegune, 2016).

The windows must be provided with colored curtains, which will prevent falling of direct light as well as absorb ultraviolet (UV) rays. Lemon yellow or green colored glass panes should be fitted in window panes as these are more effective in locking ultraviolet rays. The UV rays of fluorescent tubes should be filtered by covering the tubes. As high humidity and high temperature are more hazardous for registry materials it is advisable to maintain ideal room temperature (200-250c) and relative humidity of (RH45- 55%) for preservation of documents. Air conditioning of the stack area round the clock is an ideal example of maintaining optimum temperature & humidity for the storage of documents (Mahapatra and Chalkrabarti cited by Abdulrazaq, 2015).

- 3. Security:** Libraries are required to provide adequate security to lives and materials in the library. All materials in the library should be identified with mark of ownership to prevent incidents of theft. The use of electronic detection at the exit is also required to prevent unauthorized removal of materials with ownership mark. There is also the need for proper surveillance by staff on users consulting materials. This will go a long way in preventing stealing, mutilation and other damages to materials in libraries (Abdulrazaq, 2015).
- 4. Reformatting:** Some library materials could become brittle as a result of quality of paper used to produce them. These materials brake easily due to constant usages. To avoid the loss of intellectual content of the materials, libraries make photocopies and microfilm the materials to prolong their life span. Other forms of reformation include,
  - a. Digitization:** This is the process of converting traditional library materials such as books and paper based information materials into electronic form so

that they can be stored and manipulated. Examples of electronic form include diskettes, CD Rom, and flash.

- b. Lamination:** Lamination is another technique of reformatting used to restore a book or document into a usable condition. Lamination provides protective water proof transparent cover to all varieties of documents.
- c. Binding:** This is another method of elongating the life span of materials in the library. Materials that have been damaged over the years are taken to bindery for repairs and restoration.

## **METHODOLOGY**

The area of the study was Joseph Sarwuan Tara University Makurdi. Madurai is the capital city Benue State, North Central geo-political zone of Nigeria. The study adopted descriptive survey research design. The population of the study comprised of 150 library staff from the University under study. One instrument was used in collecting data. It was self- developed questionnaire titled: Assessment of Conservation and Preservation of Information Resource Questionnaire (ACPIRALQ). The instrument was validated by three experts to determine if the items of the instrument yielded a face and content validity. The reliability of the instrument was ensured using Cronbach Alpha method and a reliability coefficient of 0.79 was obtained. The collected data was analysed using frequency counts and simple percentages.

## RESULT AND DISCUSSION

This section is concerned with data presentation, analysis, interpretation and discussion of findings. The results are presented and analyzed based on the research questions raised for the study.

### Research Question One:

What are the types of information resources conserved in Francis Idachaba library?

To answer this research question, data on types of information resources conserved in Francis Idachaba library were collected and analysed as presented on table 1.

**Table 1:** Frequencies and percentages of information resources that are conserved

S/ N	Item s	yes %	No %	Remark
1	Books of various types and subjects	139 (92.6)	11 (7.4)	Conserved
2	Reference Resource	145 (96.6)	15(3.4)	Conserved
3	Serial materials	130 (86.6)	20 (13.)	Conserved
4	A-Vmaterials	150 (100)	-	Conserved
5	Electronic resources	140 (93.3)	10 (6.7)	Conserved

Table 1 shows the types of information resources conserved. As revealed on the table, all the items have percentage values of yes above 50 percent which were considered been conserved by Francis Idachaba library.

**Research question two:**

What are the types of deterioration of information resources in Francis Idacha library?

To answer this research question, data on the types of deterioration of information resources in Francis Idachaba library were collected and analysed as presented on table 2.

**Table 2:** Frequencies and percentages of type of deterioration of information resources

S/N	Items	Yes%	No%	Remark
1	Brittleness of information resources	120(80)	30 (20)	Agree
2	Stickiness of coated paper based resources	100 (66.6)	50 (33.4)	Agree
3	Dilution of inks	125(83.3)	25(16.7)	Agree
4	Physicals breakdown of information resources	95 (63.3)	55(36.7)	Agree
5	Discoloration of information	115 (76.6)	35(23.4)	Agree
6	Stained paper	105 (70)	45(30)	Agree
7	Rooted leather	118 (78.6)	32(21.4)	Agree
8	Weaken adhesive	90 (60)	60(40)	Agree
9	Sustained fungi	106 (70.6)	44(29.4)	Agree
10	Sustained holes	139 (92.6)	11(7.4)	Agree
11	Theft	100 (66.6)	50(33.4)	Agree
12	Mutilation	140 (93.3)	10 (6.7)	Agree
13	Vandalism	145(96.6)	15 (3.4)	Agree

Table 2 showed the types of deterioration of information resources in Francis library. As revealed on the table, all the items have percentage values of yes above 50 which were considered as the types of deterioration of information resources in Francis Idachaba library.

**Research question three:**

What are the methods of conservation and preservation of information resources used in the academic libraries under study?

To answer this research question, data on methods of conservation and preservation of information resources in Francis Idachaba library were collected and analysed as presented on table 3

**Table 3: Frequencies and percentages of Methods of conservation and preservation of information resources in Francis Idachaba library.**

S/N	Items	Yes%	No%	Remark
1	Binding	139(92.6)	11 (7.4)	Used
2	Photocopying	145 (96.6)	15(3.4)	Used
3	Microfilming	130 (86.6)	20(13.4)	Used
4	Use of CD-ROM	140 (93.3)	10(6.7)	Used
5	Video recordings	60 (40)	90 (60)	Not Used
6	Cleaning and dusting	139(92.6)	11(7.4)	Used
7	Lamination	118 (78.6)	32(21.4)	Used

<b>8</b>	Use of insecticide	115(76.6)	35 (23.4)	Used
<b>9</b>	Digital imaging	125 (83.6)	25 (16.7)	Used
<b>10</b>	Reformatting	106 (70.6)	44(29.4)	Used
<b>11</b>	Installation of air conditions	140 (93.3)	10 (6.7)	Used

Table3 shows the methods of preservation of information resources in Francis Idachaba library. As revealed on the table, items 1,2,3,4,6,7,8,9,10 and 11 with percentage values of yes above 50 were considered methods of preservation of information resources in Francis Idachaba library. Item 5 with percentage value of yes below 50 was considered not a method of preservation of information resources in Francis Idachaba library

### **Discussion of Findings**

This study found books of various types to be the most information resources conserved and preserved in Francis Idachaba library followed by reference resources, then serial materials, electronic resources, while the least is vertical file materials. This result is in agreement with that of IFLA (2010) who noted that academic libraries acquired, conserved and preserved information resources such as textbooks, serials, vertical file materials, reference materials such as encyclopedia, journals and many more as well as electronic resources. Ovwoh and Iwhiwhu (2010) maintain that libraries acquired and preserved various information resources to meet the information and recreational needs of its clientele. The library staff therefore, keeps these information resources in good physical condition to make them available for users at all times (Popoola, 2009). The fact

that majority of the library staff indicated the preservation and conservation of books of various types, references resources and serial materials over electronic resources indicated the available and accessibility of the paper-based information resources which force the library staff to embarked on preservation and conservation programmes that will safeguard these information resources from total deterioration in order to meet the ever increasing information demands of the library users.

Result of the study indicated that there are several types of deterioration of information resources which include brittleness having the highest percentage followed by stickiness of coated paper based resources, theft, mutilation and vandalism. Others include stained paper, weaken adhesive, rooted leather, sustained fungi, sustained holes, dilution of inks, while the least is physical breakdown of the information resources. This result is consistent with the findings of Adeleke et al. (2009) whose findings revealed that brittleness of information resources, discoloration and staining as well as human factors such as theft, mutilation and vandalism are the major types of deterioration of information resources in libraries. They maintain that brittleness is caused by high temperature while stickiness of paper and sustained fungi are cause by high relative humidity. Stained paper rooted leather, and sustained holes are caused by insects. Mahmood and Mari (2014) reported that deterioration of information resources is caused by insects and as termites, silverfish, cockroaches, and booklice and alike. Dilution of inks and discoloration of information resources are caused by excessive light while theft, mutilation vandalism are caused by man.

The study equally found that binding, photocopying, lamination, reformatting, micro-filming, cleaning and dusting, installation of air conditions, digital imaging, use of



insecticide, shelving of books for free flow of air and adequate security are the methods used for preservation of information resources by Francis Idachaba library. This result is in consonants with that of Abdulrazaq (2015) who identified the methods used for conservation and preservation of information resources as reformatting, digitization, cleaning and dusting, control of environment by installation fans and air conditions, lamination and biding. Besides, the result negates the findings of Ovowoh and Iwhiuhu (2012) whose findings revealed that cleaning and dusting was the only method of conservation and preservation of information resources. Also, the result is not in consonance with that of Njeze (2012) whose findings revealed that adequate security is one of the major methods of conservation and preservation of library materials, its indicated that adequate security is provided at the exist to prevent theft, mutilation and vandalism. The result of this study disagrees with the present study whereby there is no adequate security in the libraries under study with adequate security rated the least.

### **Conclusion**

Based on the result of the findings, it was concluded that conservation and preservation of information resources have become a driving force in new service platform of the libraries. Conservation and preservation have been proved to be an important tool for improving services in academic libraries. Information resources of significance should have a strategic plan of long term preservation.

### **Recommendations**

Based on the findings and conclusion made in this study, the following recommendations were advanced:

- 1 An improvement in the storage environment should be paramount. This involves the storage of information resources in an environment in which the storage temperature and humidity levels are controlled. Air conditioning is perhaps the most efficient method of bringing about this.
- 2 There should be an annual budget allocation for preservation and conservation of information resources.
- 3 A well-equipped bindery section with trained staff should be established to take care of all preservation and conservation issues.
- 4 All academic libraries should adopt everyday care methods. This involves dusting, cleaning and re-shelving of information resources to avoid their deterioration through dust particles and inappropriate shelving.
- 5 The use of electronic detective device at the exits should be encouraged as well as proper surveillance by library staff on users consulting information resources. This will prevent unauthorized removal, theft, mutilation and other damages to information resources in libraries.
- 6 Light filters should be installed in libraries because complete darkness and humid environment is a breeding ground for moulds, insects and rodents and therefore some light will raise the temperature and reduce the level of humidity.

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