Roles of Librarians in Preservation and Conservation of Information Resources in the Nigerian University Libraries

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ABSTRACT

The study investigated roles of librarians in preservation and conservation of information resources in the Nigerian university libraries. The design adopted for the study was a survey design. The population for the study consisted of all librarians working in academic libraries which were expected to attend the 56th Nigerian Library Association Conference and Annual General meeting in Lagos. "LIBRARIANS PRESERVATIVE AND CONSERVATIVE ROLES OF INFORMATION RESOURCES QUESTIONNAIRE (LPCRIRQ)" was developed and used by the researcher to collect data for the study. The instrument was face and content, validated by experts in test and measurement Department of University of Uyo with reliability coefficient of the instrument 0.92, which was derived from administration of the instrument to 30 respondents. Data obtained were analyzed using percentage analysis and charts. Findings of the study revealed that that preservation is as the totality of measures for maintaining the integrity of document and the information contained in them which includes all the managerial and financial considerations, storage and accommodation provisions, staffing level policies, techniques and methods involved in safeguarding documentary materials and that maintaining suitable environment for library information materials will prolong their life span and enhance long term accessibility. It was concluded that Academic librarians perform such preservative roles as maintenance of the integrity of document, managerial information, financial information, storage and accommodation provisions, staffing level policies. One of the recommendations was that records and information resources should be preserved and conserved digitally as it would enhance the usability of the records.

Key Words: roles of librarians, preservation of information, conservation of information, information management

Introduction

Library is a repository of knowledge and a social institution saddled with the responsibility of disseminating knowledge to the people without any discrimination. Information collections are the priceless heritage of mankind as they preserve facts, ideas, thoughts, accomplishments and evidence of human development in multifarious areas, ages and directions.

Preserving intellectual and cultural heritage becomes not only the academic commitment but also the moral responsibility of librarians, who are in charge since dissemination of library materials is only possible when the documents are in good and usable conditions. Librarians all over the world are tasked with the responsibility of acquiring, processing, disseminating information to users; and due to constant exposure of these materials to clients, the rate of degradation increases. Every library is prone to two kinds of deterioration: biological deterioration caused by insects attack and fungi growth or environmental deterioration caused by extreme dampness, wide fluctuations of relative humidity, variations in temperatures, light and atmospheric pollutants (Maravilla, 2008).

According to Osifoh (2007), preservation is concerned with maintaining or restoring access to artifacts, document and records through the study, diagnosis, treatment and preservation of materials to reduce the rate of decay and damage. While conservation refers to the treatment and repair of individual item to reduce decay or restore them to a usable state. Libraries acquire materials to meet the informational or recreational needs of their clientele. When the material in one's care is allowed to deteriorate unchecked or become damaged in anyway, it may be difficult to or unavailable for use. It is the responsibility of the library staff to keep these materials in good physical condition so that they are available for users at all times. Vast quantities of deteriorated books and documents have accumulated in many university's libraries especially in the era of economic recession. In order to solve the problem of enormous and ever growing deterioration of books, it is necessary to introduce preservation and conservation services into various university libraries in Nigeria. The function of preservation and conservation of university library and information resources in Nigeria is to provide a suitable protection for each items added to the collection and to take action in preserving it for use and for the future generation.

Preservation and conservation of library resources is a field which encompasses not only materials but includes other resources such as photograph, maps, slides, motion pictures and others. The role of preservation and conservation program will help to protect millions of publications from deterioration in Nigerian university libraries especially as education and Nigerian universities are facing financial problems arising from reduction in budgetary allocation.

Statement of the Problem

Effective preservation of library and information resources ensures the durability of the information resources (books, journals, documents, photographs, CD-ROMs, etc.) and enables users to have access to the resources at any given time in the library. One of the effective steps any library can take to preserve its holdings is to maintain safe humidity and temperature level, good air quality and controlled light. This move benefits every single item in the collection. Without a good environment, books, documents, photographs and all other library materials will become dirty, faded, moldy, brittle or pest-infested and generally deteriorate or even be destroyed. University libraries will not render effective library and information services if their resources are not taken good care of. Therefore, this study seeks to assess the role of librarians in preservation and conservation of information resources in Nigerian Universities.

Objective of the Study

The main aim of this study is to determine the role of librarians in preservation and conservation of information resources in Nigerian Universities. The specific objectives are:

1. To determine the role of librarians in preservation of information
2. To determine the role of librarians in conservation of information.

Research questions

The following research questions will be answered:

1. What are the roles of librarians in preservation of information resources?
2. What are the roles of librarians in conservation of information resources?

Literature Review

Librarians and Information Management

Librarians play crucial roles in management of information. Olivia (2000) described librarians as "Information experts in the information age". They are classified into the following categories:

Archivists who are specialized librarians that deal with archival materials, such as manuscripts, documents and records, though this varies from country to country, and there are other routes to the archival profession. Collection development or acquisition librarians monitor the selection of books, electronic resources and other information resources, while electronic resources librarians manage the databases that library license from third-party vendors. School librarians work in school libraries and perform duties as teachers, information technology specialists, and advocates for literacy. Academic librarians teach information literacy skills in face-to-face classes or through the creation of online learning objects. They instruct library users on how to find, evaluate, and use information effectively. They are most common in academic libraries.

Media specialists teach students to find and analyze information, purchase books and other resources for the school library, supervise library assistants, and are responsible for all aspects of running the library/media center. Both library media teachers and young adult public librarians order books and other materials that will interest their young adult patrons. Outreach librarians are charged with providing library and information services for underrepresented groups, such as people with disabilities, low income neighborhoods, home bound adults, incarcerated and ex-offenders, homeless and rural communities. Public service librarians work with the public, frequently at the reference desk of lending libraries. Some specialize in serving adults or children. Children's librarians provide appropriate material for children at all age levels, include pre-readers, conduct specialized programs and work with the children (and often their parents) to help foster interest and competence in the young reader.

Reference or research librarians help people doing research to find the information they need, through a structured conversation called a reference interview. Systems librarians develop, troubleshoot and maintain library systems, including the library catalog and related systems. While Technical service librarians work "behind the scenes" ordering library materials and database subscriptions, computers and other equipment, and supervise the cataloging and physical processing of new materials (McKinzie, 2002). All these are roles played by librarians to ensure proper information conservation or preservation in libraries.

Concept and Technique of Library Preservation

According to Feather and Sturges (2007), preservation are activities associated with maintaining library and archival materials for use either in their original physical form or in some other usable way. Preservation tends to include conservation, but also comprehends techniques of partial preservation of the physical object (e.g., a new binding), as well as procedures for the substitution of the original artifact by materials conversion, whereby the intellectual content of the original is at least partially preserved. Okonkwo (2009) defined preservation as the totality of measures for maintaining the integrity of document and the information contained in them which includes all the managerial and financial considerations, storage and accommodation provisions, staffing level policies, techniques and methods involved in safeguarding documentary materials. In preservation, consideration is given to every element that promotes the protection of the materials including the housing, storage system and security against such threats as theft, mutilation and poor handling.

Preservation is everything which contributes to the physical well being of library resources and it includes the protection, maintenance and restoration of library and archival information resources. The term preservation also includes all the managerial and financial considerations such as storage, accommodation provision, staffing levels, policies, Techniques and methods involved in preserving library and archival information resources. Information resources was summed up by Clooman (2001) when he stated that "preservation allows for the continuity of the past with the present and the future". According to the National Preservation Office (2001), libraries and archives contain an irreplaceable accumulation of human knowledge and experience. Nevertheless, it would be a waste of resources if after institutions such as school libraries have devoted considerable sums of money in acquiring and processing information resources and these valuable resources remain inaccessible to scholars and other bonafide users especially teachers, students and school alumni. Therefore, the cause and effect of information resources on users necessitates its preservation measures.

Preservation of paper based documents means preserving the paper-based collection of the library for example- books, journals, maps etc. There are two principal methods for the preservation of paper based documents. The first is preservation in original format by number of techniques, such as good care and handling, combined with sound protective storage; cold storage for selected materials conservation and restoration treatment; and mass deacidification (Welsh, 2010). The second method of preservation is reformatting where complete conversion of the material into another format is done to preserve the library's collections. It includes microfilming & digitization. According to Chapman, Conway and Kenney (2014), a hybrid approach can also be used for preservation of print materials, combining the usefulness of both the methods at the same time. It is the best preservation reformatting option to choose if fund is

not a problem for the libraries. But Scott (2000) argued that, "preservation of a document in its original form, an enormously expensive and time consuming proposition, may be reserved for those very few documents selected for their intrinsic value". Ovowoh and Iwhiwhu (2013) in their study of preservation of print materials gave recommendations on handling, preservation policy and budget etc.

The Concept and Technique of Digital Library Preservation

Library has continued to evolve over the years from the traditional closed access to the automated, electronic and digital open access libraries. Previously, library used to house mainly printed materials, but, in this era of ever evolving Information and Communication Technologies (ICTs), electronic and digital resources have become the central concern of librarians who want to adequately satisfy the library users. Libraries are migrating from the traditional setting to digital libraries. Currently, most libraries are made up of both print and digital collections, services and infrastructure to support lifelong learning, research, scholarly communication as well as preservation and conservation of the recorded knowledge. The digital materials make up the digital libraries.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2003), defined digital materials as resources of human knowledge or expression, whether cultural, educational, scientific and administrative or embracing technical, legal, medical and other kinds of information that are increasingly created digitally, or converted into digital form from existing analogue resources. These digital materials include texts, databases, still and moving images, audio, graphics, software and web pages among a wide and growing range of formats.

In agreement with the UNESCO (2003), Iman, Adeyoyin, Jegede, and Adesanya, (2008) defined digital materials as all information resources in machine readable format such as compact discs read only memories (CD-ROMs), diskettes, flash drives, films, microfiche and allied accessoriesXXXsuch as computer software and hardware. Digital materials in libraries include websites and databases, chats, emails and correspondences that are generated digitally as well as analogue materials which are converted into digital formats through scanning. Digital materials are frequently ephemeral and require purposeful production, maintenance and management for retention. These digital materials are the bedrock upon which digital libraries thrive in the provision of information and recorded knowledge which management, lecturers and students of academic institutions need in running the affairs of the institutions. Based on the findings of Aina (2004), the essence of library resources in the university is to ensure that the right user gets the right information materials at the right time, right format, right place and at the user's convenience. In higher education environment where researches and scholarship are paramount, the use of electronic resources is significant and the utilization of them is very much dependent on the users and purposes (Deng, 2009). Universities in Nigeria cannot thrive without information and libraries. They are to provide the right information in the right format to the right person that needs it and at the right time. Igboejesi (2003) added that academic libraries are at the centre of tertiary education by supporting, enhancing and fostering learning as well as manpower development.

Preservation of digital documents

The goal of digital preservation is to ensure the accurate rendering of authenticated content over time. Brown (2008) stated that, as a result of the deterioration of electronic and digital materials, preservation strategies are formulated in order to prevent their deterioration beginning from the creation stage. Russel, 2008 observed that Digital document preservation is a process by which digital data is preserved in digital form in order to ensure the usability, durability and intellectual integrity of the information contained therein. According to the UNESCO (2003) digital preservation guidelines, "Specific techniques and preservation strategies should be developed to preserve digital materials involving producers of digital information (including software) to include conservation as they design their products. Sawant (2006) discussed four approaches or strategies that are currently advocated for preserving digital resources. These strategies include amongst others: refreshing (periodic copying from one physical medium to another), technology preservation (replicating any old configuration of hardware and software), encapsulation and migration. Moreso, Groups such as the Digital Preservation Network strive to ensure that "the complete scholarly record is preserved for future generations". The Library of Congress maintains a Sustainability of Digital Formats web site that educates institutions on various aspects of preservation: most notably, on approximately 200 digital format types and which are most likely to last into the future.

The preservation strategies stated by UNESCO in their charter (2003), for preservation of digital materials in data carriers/ storage media are:

a. Let the institution, government, organization, individual etc decide on the format that will be accepted for preservation. If possibly, negotiate with producers to use widely accepted standards and to provide adequate documentation

b. Store media / data carriers in appropriate conditions

c. Copy data to more stable media and make backup copies, using good quality media d. Store data securely, including offsite storage for backup if possible

e. Check data for errors regularly

f. Establish a data refresh regime suited to the life of the media

g. Record information that will be needed to provide short term access – the identity of the material, access requirements, passwords etc

h. Retain necessary access equipment and software, maintaining hardware and protecting software within license arrangements

i. Plan to pass the digital materials to another suitable care taker, that is, liaising with other institutions who have similar interest or responsibilities or experience in preserving or managing the kind of materials that you are interested in and seek guidance and mentoring

j. Alternatively, find ways to adequately reflect the material in a stable non digital form (such as printing out).

Senapti and Nagta (2010) in their study identified the need for preventive measures in conservation and preservation of library materials and records. Whereas Osifoh (2007) in a study

on preservation and conservation practices and techniques in Nigerian university libraries identified causes of deterioration as wear and tear, high acidity and temperature level etc.

Concept and Technique of Library Conservation

The term 'Conservation' has been defined in the IFLA (2010) principles for the care and handling of library materials 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. Conservation therefore, is one aspect of preservation activity. It implies the active use of preventative measures, or processes to repair damaged material, and ensure the continued existence of individual items. According to Ngulube (2003), the conservation techniques could either be preventive or interventive:

Preventive Conservation: Many cultural works are sensitive to environmental conditions such as temperature, humidity and exposure to light and ultraviolet light. Taking sufficient measures to protect materials in a controlled environment where such variables are maintained within a range of damage-limiting levels is called preventive conservation.

Interventive Conservation: Interventive Conservation refers to any act by a conservator that involves a direct interaction between the conservator and the cultural material. These interventive treatments could involve cleaning, stabilizing, repair, or even replacement of parts of the original object or consolidation such as securing flaking paint.

Library stacks, circulation counter and storage areas must be kept clean of debris and dust. When dust collects on books, it absorbs and holds moisture that accelerates deterioration by acid hydrolysis. A continuing program of cleaning shelves and library materials help to control the amount of airborne dirt. And good air circulation in the library helps to reduce mould growth (Bendix and walker, 2011). Muhammad (2006) states that light from incandescent source generates heat and must be kept a distance from library collections. Blinds and shutters completely block out light from the sun, thus aid in temperature control by minimizing heat loss and heat generated by sunlight during the day. Filters made of special plastics help control Ultra violet (UV) radiation, and the use of special low UV florescent tubes is very important.

Maintaining suitable environment for library information materials will prolong their life span and enhance long term accessibility. The environmental factors that are typically monitored include temperature and relative humidity, air quality (gaseous and particulate), light sources and levels of microbiological infestation (Jordan, 2003).

Effective environmental control depends on the use of appropriate furniture (closed shelves or shallow drawers), containers (horizontal or vertical file, print or document boxes), and housing (paper or polyester enclosures). Appropriate procedures incorporate integrated pest management and emergency preparedness into building and collections maintenance (Wilcox, 2005). Disasters, which can result from fire, flooding, storms, earthquakes or broken steam pipes, can damage or destroy a few items or entire collections. Vigilance, preparedness and recovery plans are the best guards against loss from disaster (Alegbeleye, 2003).

Threat or problems facing preservation and conservation of library resources

The greatest enemy of information materials is the librarian or archivist who neglects his collections in the quest for ever more efficient management systems, People pose the most constant threats to information resources, (Harvey, 1992). Abuse, whether imposed by archival 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. While much damage results from carelessness, abuse also includes such blatant actions as mutilation, vandalism and theft.

Research Methodology

Carrying out the study a survey design was adopted as the expected population was more than 1000 librarians. The targeted population was all librarians working academic libraries expected to attend the 56th Nigerian Library Association Conference and Annual General meeting in Lagos. The researcher used a research instrument tagged "LIBRARIANS PRESERVATIVE AND CONSERVATIVE ROLES OF INFORMATION RESOURCES QUESTIONNAIRE (LPCRIRQ)" validated by experts in test and measurement Department of University of Uyo. The reliability co-efficient was 0.92 derived from administration of the instrument to 30 respondents.

These instruments were then administered randomly to 245 librarians in the conference hall. Three research assistants helped the researchers in issuing out and retrieving the questionnaires from the respondents. Out of the 245 questionnaires, 240, representing 97.96% returns were retrieved. Descriptive statistics (percentage analyses and charts) were used to answer the research questions.

Table 1: Sample frame of the respondents from universities

S/N	Names of institution	Number returned
1.	Abia State University, Uturu	12
2.	Obafemi Awolowo University, Ile-Ife	3
3.	Afe Babalola University, Ekiti	10
4	Akwa Ibom State University, Ikot Akpaden	4
5.	ABTI University of Nigeria, Adamawa	8
6.	Babcock University, Ogun State	12
7.	Bayero University kano	3
8.	Benue State University, Benue	8
9.	CETEP City University, Lagos	5
10.	College of Education, Afaha Nsit	5
11.	Federal University of Ondo	9
12.	Federal University of Technology, Akure	12
13.	Landmark University, Kwara	5
14.	National Open University of Nigeria Lagos	11
15.	University of Benin, Benin City	12
16.	University of Calabar, Calabar	11
17.	University of Ibadan, Ibadan	17

18.	University of Lagos	36
19.	University of Maiduguri, Maiduguri	11
20	University of Nigeria, Nsukka	26
21.	University of Port Harcourt, Port Harcourt	20
	TOTAL	240

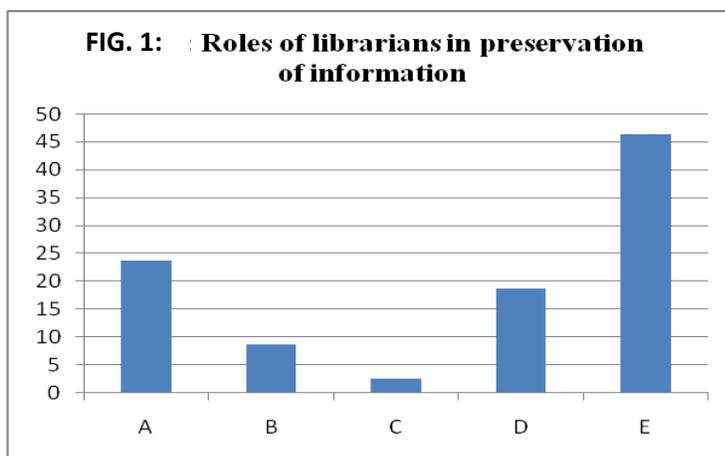## Results and Discussions

Results
Research Question One

The research question sought to find out the roles of librarians in preservation of information. To answer the research question, percentage analysis was performed as can be seen in table 1 and figure 1.

Table 1: Percentage analysis of the roles of librarians in preservation of information

Roles of Librarians in Preservation of Information Resources	Freq	Percentage (%)
Maintaining the integrity of document	57	23.75
Maintaining the integrity of the managerial information	21	8.75
Maintaining the integrity of the financial information	6	*2.5
Maintaining the integrity of storage and accommodation provisions	45	18.75
Maintaining the integrity of staffing level policies	111	**46.25
TOTAL	**240**	**100**

** The highest percentage frequency
*   The least percentage frequency

FIG. 1:   Roles of librarians in preservation of information

A - Maintaining the integrity of document

B - Maintaining the integrity of the managerial information

C - Maintaining the integrity of the financial information

D - Maintaining the integrity of storage and accommodation provisions

E - Maintaining the integrity of staffing level policies

SOURCE: Field survey

The above table 1 and figure 1 present the percentage analysis of the roles of librarians in preservation of information. From the result, it was observed that the highest percentage of the respondent 111(46.25%) said the roles of librarians in preservation of information includes maintaining the integrity of staffing level policies, seconded by respondents 57(23.75%) who said it includes maintaining the integrity of document. This was followed by respondent who said maintaining the integrity of storage and accommodation provisions 30(12.5%). The second to the least respondents on the subject matter affirmed that maintaining the integrity of the managerial information 11(4.58%), while the least number of respondents 6(2.5%) said maintaining the integrity of the financial information.
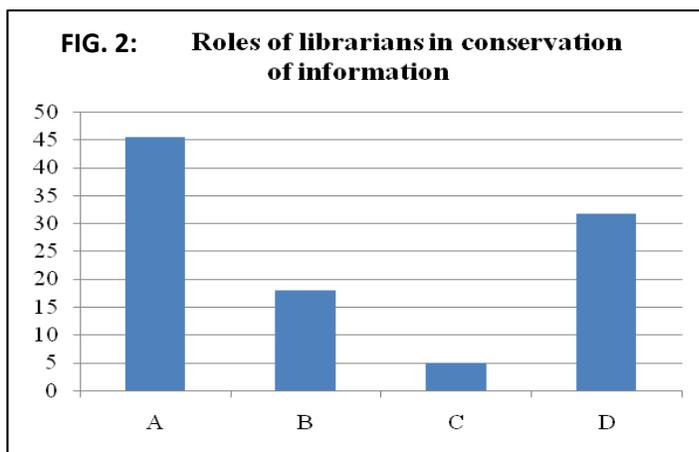
Research Question Two

The research question sought to find out the roles of librarians in conservation of information. To answer the research question, percentage analysis was performed as can be seen in table 2 and figure 2.

Table 2: Percentage analysis of the roles of librarians in conservation of information

Roles of Librarians in Conservation of Information	Freq	Percentage (%)
caring and handling of library materials for prolonged life span and against deterioration	109	**45.42
actively using preventative and Interventive measures,	43	17.92
ensuring repairs of damaged materials	12	*5.00
ensuring the continued existence of individual items	76	31.67
TOTAL	**240**	**100**

** **The highest percentage frequency**
* **The least percentage frequency**

SOURCE: Field survey

The above table 2 and figure 2 present the percentage analysis of the roles of librarians in conservation of information. From the result, it was observed that the highest percentage of the respondent 109(45.42%) said the roles of librarians in conservation of information includes caring and handling of library materials for prolonged life span and against deterioration, seconded by respondents 76(31.67%) who said it ensuring the continued existence of individual items. This was followed by respondent who said actively using preventative and Interventive measures 43(17.92%), while the least number of respondents 12(5.00%)said ensuring repairs of damaged materials.

Discussion of Findings

The result of the percentage analysis in table 1 and figure 1 show that the highest percentage of the respondent 111(46.25%) said the roles of librarians in preservation of information includes maintaining the integrity of staffing level policies, seconded by respondents 57(23.75%) who said it includes maintaining the integrity of document. This was followed by respondent who said maintaining the integrity of storage and accommodation provisions 30(12.5%). The second to the least respondents on the subject matter affirmed that maintaining the integrity of the managerial information 11(4.58%), while the least number of respondents 6(2.5%) said maintaining the integrity of the financial information. The findings of this study is highly supported by Okonkwo (2009) who posited that preservation is as the totality of measures for maintaining the integrity of document and the information contained in them which includes all the managerial and financial considerations, storage and accommodation provisions, staffing level policies, techniques and methods involved in safeguarding documentary materials.

The result of the percentage analysis in table 2 and figure 2 show that the highest percentage of the respondent 109(45.42%) said the roles of librarians in conservation of information includes caring and handling of library materials for prolonged life span and against deterioration, seconded by respondents 76(31.67%) who said it ensuring the continued existence of individual items. This was followed by respondent who said actively using preventative and Interventive measures 43(17.92%), while the least number of respondents 12(5.00%) said ensuring repairs of damaged materials. This finding is in line with Adcock, 1998, who submitted that maintaining suitable environment for library information materials will prolong their life *span and enhance long term accessibility.

Conclusions

The following conclusions were made based on the results of the study:

Academic librarians perform such preservative roles as maintenance of the integrity of document, managerial information, financial information, storage and accommodation provisions, staffing level policies, etc. the librarian also actively perform such roles as giving care and handling of library materials for prolonged life span and against deterioration, actively using preventive and interventive measures as well as ensuring repairs of damaged materials, ensuring the continued existence of individual items, etc.

Recommendations

The following recommendations are deemed necessary:

1. It is pertinent that in every university library, there should be a routine of regular training of the librarians on such a major function of library as management of information materials for effective utilization.

2. They should also be trained on the modern library operations with respect to provision and maintenance of information in many formats, including: books; electronic resources; magazines; newspapers; audio and video recordings; maps; manuscripts; photographs and other graphic material; bibliographic databases; and web-based and digital resources and man y more for effectiveness in their services.

3. Records and information resources should be preserved and conserved digitally as it would enhance the usability of the records.

4. They librarians are expected to be exposed to techniques of partial preservation of the physical object as well as procedures for the substitution of the original artifact by materials conversion, whereby the intellectual content of the original is at least partially preserved.

5. They should be trained on n how to maintain the integrity of document and the information contained in them which includes all the managerial and financial considerations, storage and accommodation provisions, staffing level policies, techniques and methods involved in safeguarding documentary materials.

6. They should see the need to make available, every element that promotes the protection of the materials including the housing, storage system and security against such threats as theft, mutilation and poor handling.

7. Librarians should be more involved in preventive conservation where the materials are protected against environmental conditions such as temperature, humidity and exposure to light and ultraviolet light and interventive conservation where there is an involvement of cleaning, stabilizing, repair, or even replacement of parts of the original object or consolidation as well as library stacks, circulation counter and storage areas.

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