

PRESERVATION AND CONSERVATION OF INFORMATION RESOURCES: EVIDENCE- BASED FROM SOUTHERN DELTA UNIVERSITY LIBRARY, DELTA STATE

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Abstract

The library plays a pivotal role in empowering information professionals and promoting national development. Through structured curricula, library schools provide librarians with the necessary knowledge and skills to effectively manage information resources, promote information literacy, support research and scholarship, preserve cultural heritage, promote lifelong learning and bridge the digital divide. This study aims to identify Preservation and Conservation Information Resources in the Southern Delta University Library. Three purposes of the study were formulated to guide the study. A descriptive survey design was used in the study. The study population consisted of sixteen (16) librarians from Southern Delta University Library, and an enumerative technique was used due to the sample size. The sample size of the study is sixteen (16). The instrument used to obtain information was a structured questionnaire, and the data collected were analyzed using the mean. The findings revealed that library security is the most widely used measure of preservation and conservation practices. Dust and particulate matter are the greatest causes of library material deterioration. The findings further revealed that dusting, cleaning, and proper shelving are the major techniques adopted by libraries. The study concluded that a lack of proper preservation and conservation practices in universities is the cause of resource loss and deterioration. Therefore, the study recommended that libraries deploy modern preservation and conservation tools such as technologically enabled ICT devices, which will aid in adequate storage and enhance the durability and longevity of information materials in libraries.

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Introduction

Across the globe, the library plays a pivotal role in empowering information professionals and promoting national development. Through structured curricula, library schools provide librarians with the necessary knowledge and skills to effectively manage information resources, promote information literacy, support research and scholarship, preserve cultural heritage, promote lifelong learning and bridge the digital divide (Van Kerkhoff & Lebel, 2016). The library has been instrumental in supporting research and scholarship. Academic libraries are the backbone of research institutions, providing access to a wide range of scholarly resources (Onuoha et al., 2020). Library is established to support teaching, learning, research, and community services. Maidabino (2010) stated that the university library is the only centralized location where new and emerging information technologies can be combined with knowledge resources (information) in a user-focused, service-rich environment that supports today's social and educational patterns of teaching, learning, and research. Hence, university libraries conserve existing knowledge and transmit knowledge (Uzuegbu, 2012). Okiro (2012) perceived academic libraries as libraries attached to tertiary institutions, especially universities. The authors posited that libraries that are explicitly established, organized and maintained by universities are referred to as university libraries. Such libraries, according to them, provide the information needs of university publics, thereby supporting teaching, learning, research and public services of the parent institution. It has also been reported that such libraries are usually larger than other academic libraries in both scope and objectives and are intended to serve a broader public of the learned populace (Uzuegbu, 2012). In general, Uzuegbu (2012) opined that apart from the role of university libraries in teaching, learning and research, they must collect, preserve, promote and disseminate information to their users. Therefore, based on the foregoing roles of libraries, they are indeed the most essential libraries across the universe, courtesy of their statutory role in education and research. Subsequently, users of libraries, especially students, expect libraries to make available directly or remotely and in real-time the needed information resources and services, formats notwithstanding (Anunobi and Edeka, 2010).

According to Kemuma (2013), library materials deteriorate within the shortest period of time when publisher's inferior materials of low quality, such as when the paper changes color due to wear of paper glue or exposure to inherent or external sources of light. This has increased in our local publications. Even though these materials will not last forever, that does not mean that as a librarian, you cannot take good care of the documents so that they can last for a long time. You can do that by making sure that the environmental conditions are favorable to the document, that is, ensuring constant humidity and temperature, shelving well, maximum security, and handling the document well so that the materials can last for future generations.

Library materials are in a wide variety of sizes, shapes and formats and often present problems in relation to library storage and access procedures. Some of the materials like television sets, cassettes, cartridges, film recording, computers etc can prove heavy and cumbersome for handling, while others like slides, filmstrips, and multi-media kits can be very difficult to organize, shelve, and control. Media records often have standards laid down that are associated with storage and control. Enright (n.d) stated that playing a videotape removes minute layers of the original, and a librarian concerned with media records has to be aware of the point at which the technical condition of an item will militate against its effective use. It is necessary to mention that compared to books, many media materials are more vulnerable to careless treatment and abuse. The annoyance and frustration caused to users and audiences by providing damaged or defective materials can dent the reputation of a library and deflect a user's confidence in its services. Furthermore, it can be very monumental indeed. Therefore, the researcher investigated preservation and conservation resources information resources: evidence- based from southern delta university library, Delta State

Purpose of the Study

The purpose of this study was to examine the preservation and conservation of resources in the southern delta university library in Delta State, Nigeria. The specific objectives are as follows:

1. examine the causes of deterioration of library materials in the southern delta university library, Delta State, Nigeria
2. established techniques for the preservation and conservation of library materials in the Southern Delta University Library, Delta State, Nigeria
3. determining the challenges of effective preservation of library material at the southern delta university library, Delta State

Literature Review

Dare and Ikegune (2018) investigated the preservation and conservation of serial collections in selected academic libraries in Oyo State, Nigeria. Relevant literature on the concept of serials, importance of serials in academic library, preservation and conservation of serials, methods of preservation and conservation of serials, importance of preservation and conservation of serials, and factors affecting the preservation and conservation of serials was reviewed. Seven objectives and seven research questions guided the study, and the descriptive research design of the survey type was adopted. The study population consisted of two hundred and fifteen (215) library personnel in the three selected academic libraries. The study population consisted of paraprofessional and professional librarians. Data were collected using a questionnaire. Data collected, were analyzed using simple percentages, mean, and frequency distribution methods. The study answers seven research questions. The result of the study revealed that the three libraries recruited a more male staff than their female counterparts. It was revealed that journals, magazines and newspapers, among others, were the types of serial materials that are available and most frequently consulted; preserved and conserved in the selected academic libraries. The study also revealed that being prone to vandalism, lack of knowledge and skills and theft and mutilation were reasons why serial materials are not available for use in the selected academic libraries. The study revealed that conditions for preserving and conserving serials were disallowing bags and coats into the serial section, maintaining vigilance, and regular housekeeping, among others. Microfilming, a fumigation exercise, and disaster preparedness were the major methods adopted to preserve serials. The study also revealed that the selected academic libraries have a preservation and conservation policy and that the measures put in place to contain emergency were provision of fire alarms and fire extinguishers. It was revealed that a lack of preservation and conservation librarians in the library, insufficient funds, and lack of interest on the part of staff and inadequacy of equipment were the problems associated with the preservation and conservation of serials. Based on these findings, the following were recommended: Library management should organize a training programmes for their library personnel and send staff for seminars and workshops on the preservation and conservation of serials materials in order to be able to care for the serials collection in the library.

Adekannbi and Wahab (2015) conducted a comparative analysis of the preservation and conservation techniques of selected special and academic libraries in Nigeria. Six research questions and three hypotheses guided the study. The study population comprises 20 librarians from the selected libraries. Purposive sampling was adopted in selecting special and academic libraries and 20 libraries, seven (7) academic and thirteen (13) special libraries were used for the study. The questionnaire was used to collect data from the respondents. The procedure for data analysis was descriptive. The study determined the causes of deterioration in both special and academic libraries were dust, wear and tear, excessive photocopying, pests, excessive light, frequent use of material, magnetism and biological agents. The results further showed, among others, that both special academic libraries adopted cleaning

and dusting, shelving to allow free flow of air, security systems, de acidification, technology preservation, refreshing and migration to preserve their information resources. It discovered further inadequate funding, lack of necessary facilities, inadequate manpower, adequate staff training and users and security, autonomy and administrative lags, and power as challenges to preservation and conservation techniques. Techniques have to do with some measures adopted by libraries to protect or prevent the entire library materials and collections from being harmed, damaged or deteriorated. The following are some of the techniques used for preservation of information resources in libraries: cleaning and dusting of information resources, photocopying, re-binding, microfilming, lamination, fumigation, shelving to allow free air flow, air conditioning, and digitization.

Ogunniyi and Adejube (2014) investigated strategies for curbing the deterioration of library materials in selected colleges of education libraries in Southern Nigeria. Six objectives guided the study, and two hypotheses were proposed in the survey research method. Questionnaire was used to collect data from respondents, total populations of 13 academic librarians were used, and the procedure for data analysis was descriptive statistical analysis. The most prominent incidences of deterioration were broken spines, vandalism, and mutilation of the projects. The results also showed that none of the college libraries has digitized the undergraduate projects. The study therefore recommends digitization of projects in all colleges of education, provision of air condition and ventilation, cleaning and dusting of information resources, provision of photocopy machines, re-binding and microfilming

Ozioko (2014) conducted a study on the preservation and conservation of library resources in federal university libraries in the southeast of Nigeria. Six objectives were adopted in the study. A descriptive survey research design was used in the study. The population of the study consisted of 93 academic librarians, and 93 academic libraries comprised of four university libraries in the South-East Zone were sampled. There was no need for sampling because the entire population, which included the 93 academic libraries in the four federal universities, was used. Observation checklist, questionnaire, and oral interview were used for data collection. 93 copies of questionnaire were distributed and collected, representing the 100% in analyzing the data obtained, frequency counts, simple percentages, and mean (\bar{X}) were used as statistical methods. The results obtained from the findings revealed that various types of preservation and observation practices exist in University Libraries; that despite the preservation and conservation practices available in these libraries; that library resources are deplorable in these libraries; that the academic Librarians agreed with factors necessitating these libraries in adopting preservation and conservation; that the academic librarians are merely satisfied with the extent under which preservation and conservation are applied to materials in these libraries; that there are some problems associated with preservation and conservation of library resources in these libraries; that many strategies were suggested by the academic librarians to enhance the preservation and conservation policies in these libraries. Based on this finding, it was recommended that these libraries should put into practice all the available preservation and conservation policies in their libraries; that regular power supply should be improved upon; sanctions among the librarians should be encouraged; tanning personnel of the library should be organized for the academic librarians; adequate funding and infrastructure should be given to the library users; proper cleaning and dusting as well as proper shelving of books should be given to library materials; eating in the library should be discouraged and regular fumigation of the library should be put into practice.

Mohammed et al (2019) in their study investigated the problems of the preservation and conservation of library digital resources at the Federal University of Technology Minna and Ibrahim Badamasi Babangida University Lapai. Four research questions guided the study. This study adopted a descriptive survey design and population of 74 professional and paraprofessional library staff from the Federal University of Technology Minna and Ibrahim Badamasi Babangida University Lapai. The study used the entire population of professional and paraprofessional library staff; thus, total enumeration was used. Seventy-four (74) copies of the questionnaire were distributed sixty (60) copies filled and returned; representing a return rate of 81%. The data collected were analyzed using percentages. The findings of the study revealed that library staff agreed that the aim of preservation and conservation of digital information resources in the library is to prolong their lifespan. The library staff also agreed on the type of preservation and conservation techniques used to digital information resources in the selected libraries and how those types helped in protecting the digital resources. Furthermore, the study revealed

that the majority of library staff agreed that problems that militate against the preservation and conservation of digital information resources negatively affect the lifespan of library materials. The study also found that the majority of library staff agreed that possible strategies for the effective preservation and conservation of digital information resources in the selected libraries should be developed in academic libraries in order to enhance preservation and conservation of digital library materials. The study thus recommends that libraries should be given allocation from the budget of the library exclusively for the preservation and conservation of digital information resources. The need for more qualified staff in the area of the preservation and conservation of digital information resources in academic libraries should be a matter that needs urgent attention. There is a need to educate library users on how to handle and use these modern information resources with care.

Irene (2016) conducted a study on digital preservation and institutional repositories; case study of Universities in Kenya. The study was conducted at the University of Kwazulu Natal in 2016. This study investigated the strategies used by universities in Kenya for the preservation of their scholarly content, which was the first of its kind. The survey method was used in the multiple-case study design. Data were collected using questionnaires administered to 350 postgraduate students selected from six universities in Kenya. Personal interviews were conducted to collect data from the university libraries in these six universities. The findings from the study revealed that the scholars at these universities were personally engaged in the preservation of their digital information but did not extensively use university digital archives, servers, or repositories. This was largely attributed to a lack of awareness of the important role of digital preservation. The study recommends that even with the existence of institutional repositories, much is needed to be done to create more awareness and acceptance of digital repositories.

Theoretical Framework

Open Archival Information System (OAIS) Model

The Open Archival Information System (OAIS) is a high-level reference model. It was developed in 1996 by the Consultative Committee for Space Data System (CCFSDS), in which representatives of the leading space science agencies (NASA) from North America, Europe, and Japan participated. The OAIS reference model provides a unifying set of concepts for an Open Archival Information System archive. It consists of an organization of people and systems that accept responsibility for preserving information and making it available to a designated community. The OAIS model was originally developed to assist organizations with the preservation of large databases of space science information, but it has been used for several other contexts, including the project NEDLIB and in archival programme development. OAIS provides terminology and concepts for describing and comparing the architectures and operations of archives, defines the responsibilities of an open archival information system and offers detailed models for functions, components and processes necessary to support long – term preservation and access to digital information. The OAIS MODEL is important for digital preservation standards and strategies because it defines the functions and requirements for a digital archive through an international standard that vendors and producers of digital information can refer to. The Open Archival Information System OAIS was adopted for this study because it is a powerful model for digital archiving that has informed much contemporary thinking and practice in digital preservation. The OAIS model illustrates that there is tremendous variety in the players, content, and technology that will naturally shape any programme to archive digital periodicals. The OAIS reference model provides a comprehensive framework for all functions required for digital preservation, which agrees with this study, including ingesting, storage, retrieval, and long-term preservation of digital objects. These digital materials in the library are preserved and are made available for specific people (users).

Methodology

A descriptive survey design was employed in this study. According to Ali (2016), descriptive surveys are those studies concerned with collecting data on and also describing in a systematic manner the characteristic features and facts about a given population. The study population consisted of librarians of Southern Delta University Library, Nigeria, with a total population of 16. Out of the 16 staff members, only the head with PhD Degree and others with HND in LIS fields worked in the library. The sample for the study was sixteen (16) Librarians. The sample of the study comprises of the entire librarians. The sampling technique adopted was enumerative sample

size. The instrument used for the data collection for this study was questionnaire. The questionnaire was titled “Preservation and Conservation of Library Materials. Mean statistics and standard derivations were used to determine the scaling statements in the questionnaire. The nominal values were assigned to different sealing statements as follows.

Strongly Agreed	4
Agreed	3
Disagreed	2
Strongly Disagreed	1

The cutoff value was determined by finding the mean nominal value assigned to the options in each questionnaire item using the formula.

$$\bar{X} = \frac{\sum fx}{N}$$

Where

\bar{X} = mean score

x = the score

N = number of items

Thus;

$$\bar{X} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$$

Decision Rule

The decision rule was that responses with a mean score of 2.5 and above were regarded as accepted, while responses below 2.5 were regarded as rejected.

Data analysis

Research Question 1: What cause the deterioration of library materials in the southern Delta University Library, Delta State?

Table 1: Mean ratings of respondents regarding the causes of library material deterioration

s/n	Items	\bar{x} Mean	Remark
Print materials			
8	Excessive light	2.8	A
9	Poor book shelving	3.2	A
10	Dust and particulate matter	2.7	A
11	Relative humidity	3.0	A
12	Wear and tear due to rough handling	2.7	A
13	High temperature level	2.5	A
14	Biological agents (termite, cockroaches, spider, rodents etc)	3.0	A
Non-print Materials			
15	High humidity and heat	3.0	A
16	Excessive light	2.6	A
17	Atmospheric pollutants	2.5	A
18	Oxidation	2.9	A
19	Dust	2.9	A
20	Biological Agent	2.7	A
21	Magnetism	2.5	A
Grand Mean		3.0	

Table 1 presents all identified causes of deterioration of library materials among the sampled institutions. The item 8-21 shows that all identified causes of deterioration have effects on library materials. This implies that management is required to improve the effects of those causes on library materials.

Research Question 2: What preservation and conservation techniques are used for library materials in the southern delta university library, Delta State?

Table 2: Mean ratings of respondents about preservation and conservation techniques of library materials used

s/n	Items	\bar{x} Mean	Remark
22	Provision of adequate security system to prevent the theft, mutilation, and defacing of paper-based materials	2.9	A
23	Installing air-conditioners in the library	2.9	A
24	Binding	2.7	A
25	Encapsulation	2.7	A
26	Photocopying	3.0	A
27	Digitization	2.7	A
28	De-acidification	2.5	A
29	Cleaning and dusting	2.8	A
30	Shelving library materials to allow air to flow freely	3.2	A
31	Use of insecticide and insect repellent for library material techniques	3.0	A
Grand Mean		2.84	

Table 2 reveals the mean score for all item statements in relation to preservation and conservation practices in libraries, and it shows that all the responses recorded mean scores above the trash hold of 2.5, meaning that all the respondents accept the use of preservation and conservation techniques enlisted.

Research Question 3: What are the challenges in the effective preservation of library materials in the southern delta university library in Delta State Nigeria?

Table 3: Mean ratings of respondents' responses to the challenges of effective preservation of library materials

s/n	Items	\bar{x} Mean	Remark
32	Harsh environmental conditions and other factors	3.0	A
33	Lack of competent preservation manpower	2.7	A
34	Lack of plans for managing record	2.9	A
35	Lack of institution to train library personnel on preservation practices	2.7	A
36	Inadequate funds to execute preservation programme	2.7	A
37	Lack of preservation policy and strategy	2.9	A
38	Indifference in management toward preservation	2.5	A
Grand Mean		2.77	

Table 3 reveals that the item 32-38 were agreed upon by the respondents. All mean scores were accepted as they were above the 2.5 criteria standard for acceptance.

Discussion of Findings

The results showed, among others, that both special academic libraries adopted cleaning and dusting, shelving to allow free flow of air, security systems, de-acidification, technology preservation, refreshing and migration to preserve their information resources. The findings revealed inadequate funding, lack of necessary facilities,

inadequate manpower, inadequate staff training and users and security, autonomy and administrative lags, power etc. The study reveals that the majority of the respondent's techniques of preservation of information resources listed were adopted in the university library. These techniques included: Photocopying of printed documents, re-binding of books and periodicals, microfilming of periodicals, fumigation of the library building, lamination of charts and related documents, air conditioning of all spaces, cleaning and dusting of the books and computers and digitization of old publications of staff, storage of electronic materials such as Compact Disc Read-Only Memory (CD-ROMs), digital video discs (DVDs) in containers, steel cabinet and use of hard disc or flash disc to store electronic books and electronic journals.

This finding is similar to that of Olatokun (2018), who conducted a survey of the various techniques used in the preservation and conservation of library materials in selected university libraries in Nigeria. Findings revealed that preservation and conservation techniques although adopted in the university libraries, were not effectively in use, although the libraries all had preservation policies. The study also revealed that cleaning and dusting library materials were the most commonly used techniques. The study established that there are indeed incidences of deterioration, the most prominent being books becoming torn and cracking and scratching of digital materials. Further results showed that although some libraries adopted and used some digital preservation techniques, they were still not effectively used. Other findings revealed that inadequate funding was the most severe inhibitor of effective preservation and conservation activities in university libraries.

The study reveals that the majority of the respondents agreed that books were mostly borrowed in the library, mostly consulted in the library, and mostly consulted also were the reference materials, electronic resources and serial publications such as journals, magazines and newspapers, which are partially consulted in university libraries in Niger State. This finding agrees with the findings of Nkamnebe, Udem and Nkamnebe (2014) as the co-authors assessed the use of library resources and services by students at Paul University, Awka in Anambra State, Nigeria. The study revealed the levels of use of library and information resources. The findings revealed that students fairly used the library for their studies. Observations showed that the students mostly used the library during the examination periods. The results also revealed that the resources currently available were fairly accessible to the students. Furthermore, the study revealed that the clientele was satisfied with the services and facilities provided by the library. Problems militating against the effective use of the university library by students were identified and solutions were proffered. It was recommended among others that the habit of using the Library should be inculcated into students through avenues such as organizing library show, library orientation, library exhibitions and inclusion of use of library as a course in the University's curriculum so as to attract students to the library.

The study reveals that respondents agreed with the statements on the challenges of effective preservation of library resources in university libraries. The statements include the following: lack of competent manpower in preservation, lack of plans for managing records, inadequate funds to execute preservation programme, lack of institution to train library personnel, lack of preservation policy and strategy, indifference of the management toward preservation and harsh environmental conditions and other factors. This finding agrees with that of Njeze (2012), who conducted research on Preservation and Conservation Issues in Selected Private Universities in South-West Nigeria. It was discovered that the challenges facing all the universities studied were the lack of comprehensive preservation policies, trained manpower and funding, which also affected the infrastructural development of the libraries and their preservation policy.

Similarly, this finding also agrees with that of Ogbodo (2011), who examined the preservation of information sources in a polytechnic library in Benue State. The study found that the problem of the preservation of

information sources in university libraries is the dust and disintegration of books, and the library did not adopt the use of modern technology. The results showed, among others, problems in the preservation of information sources in University library in Nigeria. It was reported that the University library adopted repairs, the use of firefighting equipment, binding, fumigation, air conditioning, proper storage, photocopying/duplication, use of insecticides and the storage of books away from light to preserve their information source. The findings revealed inadequate funding, harsh environmental conditions, a lack of good preservation policy, and lack of competent manpower as constraints to the use of preservation and conservation techniques.

Conclusion and Recommendations

This study assessed the preservation and conservation of library materials. The terms preservation and conservation were defined. The concepts of preservation of library materials, conservation of library materials, causes of deterioration of information resources, techniques adopted for preservation of information resources, levels of use of information resources, and challenges for effective preservation of information resources were highlighted. It is evident from the results of this study that the preservation and conservation of library materials are of great importance to any academic library in Nigeria. Library materials should be properly preserved and conserved because of the significant roles they play in academic and research and are most often used or consulted by students and the Academic staff. Management practices on preservation and conservation is of paramount importance for the effective use of library materials in the academic library because it will encourage the acquisition of materials in the library and reasons why materials are not often available in the library such as vandalism, lack of knowledge on preservation and conservation of serial materials, theft and mutilation of serial materials, high cost of periodical materials and poor staff vigilance will be overlooked.

Moreso, it is significant to know that methods such as microfilming, fumigation exercise, disaster preparedness, binding, digitization of material Publication, reformatting, de-acidification and preservation of materials in original format were the appropriate methods that should be adopted to preserve materials in an academic library. This study has been able to reveal that the problems of preservation and conservation of materials collection in the university library in Anambra state are a lack of preservation and conservation librarians in the library, insufficient funds, lack of interest on the part of staff and inadequacy of equipment.

In view of the forgoing, it can be seen that the preservation and conservation of material collections in the university library leave much to be desired. Therefore, the librarians at the university library must strive to take urgent and concrete steps to check further deterioration of its material collection. Based on these findings, the study recommended that;

1. A thorough weather and environmental control evaluation will be conducted in the university. Installation of air conditioners is necessary
2. De-acidification should become a common practice in libraries.
3. Libraries should deploy modern preservation and conservation tools such as technologically enabled ICT devices that will aid in adequate storage and enhance the durability and longevity of information materials in libraries.

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