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ASSESSMENT OF THE CAUSATIVE FACTORS OF DETERIORATION OF INFORMATION RESOURCES IN UNIVERSITY LIBRARIES IN NASARAWA STATE, NIGERIA

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Abstract
The study assessed the causative factors of deterioration of information resources in university libraries in Nasarawa State, Nigeria. Three objectives with corresponding research questions guided the study. The study adopted a descriptive survey research design. The population of the study comprises 115 university library staff in Nasarawa State. The instrument for data collection was a self-developed structured questionnaire. Data collected was analyzed using Frequency Counts, Percentages, Mean and Standard Deviation. Findings of the study revealed that the types of information resources prone to deterioration in university libraries in Nasarawa State to include; Atlases, books, compact disk like CD-ROM, computer systems. Memory cards and Flash Drives among others. Also, environmental factors that cause deterioration to include: dust, excessive sun light rays, poor storage facilities, poor ventilation, unpleasant temperature and unstable relative humidity. Finally, conclusion and recommendations were made based on the research findings.

Keywords: Assessment, Causative Factors, Deterioration, Information Resources

Introduction

A library is a repository of wisdom of great thinkers of the present and past. It is a social institution charged with the responsibility of gathering, organizing and disseminating knowledge to the people without any discrimination. Libraries are broadly categorized into several types based on their functions. Academic libraries encompass all the libraries established in academic environment especially institutions of higher learning. According to Lnwegbara (2013) academic libraries are libraries that are attached to post-secondary institutions.

A University library as type of academic library is a library that is attached to a university to support its academic activities. Thus the primary objective of the university library is to provide literature in support of the programmes offered by their parent institutions. Anything that will decrease the quality of information resources in performing its intended functions may be regarded as deterioration.

The concept deterioration may mean a state of depreciation in value or in quality. Abiodum (2013) defines deterioration as a change of original state of any material by interaction between the object and the factors of deterioration. It is therefore the loss of original quality of any library material which decrease its ability to carry out its intended function. Deterioration is a state in which library materials depreciate in value as well as in quality. Materials that may seem suitable for preservation and conservation, storage or display purposes can have serious, negative influence by agents of deterioration on both book and non-book collections. They can cause corrosion, discoloration or deterioration of objects, either because they give off harmful vapours or because they have indirect contact with the library information resources. These processes of corrosion, discoloration or deterioration are speed up by high temperature and high humidity levels (Mueseums, 2016). This implies that library information resources are subjected to agents of deterioration.

Some environmental elements may likely have caused library resource deterioration. The accumulation of dust and dirt on books and electronics in the libraries are common elements of environmental effect on library information resources in some libraries. The irregular changes in climate and temperature may have sad effect on library materials as not all the time the weather may be comfortable for storage conditions and even the role of biological agents in the deterioration of library resources cannot be overruled.

Deterioration of library information materials does not limit to printed materials. Osayuwa- Odigie and Eneh (2010) stress that the preservation needs of non-books materials are often more complex and more difficult to meet than those of ink on paper. Njoku, Uwakwe and Mbagwu (2015) lamented that if library resources are subject to deterioration in the university libraries, then deterioration may place library resources in jeopardy, gradually deplete the information

materials and reduce the libraries effectiveness in supporting teaching, learning and research activities of university.

The university library information resources are the central focus of any university. The collection should be adequate, qualitative and updated. The process of securing information resources should be stable, constant and there should not be any hindrance of access to the information resources. The library staff need to be so proficient to face the agents of deterioration. Particularly in the library setup it is extremely important to understand what constitutes these environmental factors of deterioration, what are their remote and immediate causes, how those causes can be nipped at the bud by the library? So assessment of these causative factors of deterioration is unavoidable to measure the safeness and healthiness of the information resources as it is able to meet the requirements of the users. It is against this background that this study sought to assess the causative factors of deterioration of information resources with special reference to environmental causes in university libraries in Nasarawa State, Nigeria.

Statement of the Problem

University libraries put in their time, effort and resources to provide, organized and make accessible the information resources to its users and potential users as well. These services could only be achieved when the information resources are in good and usable condition. However, several studies have revealed that there are environmental agents of deterioration destroying library information resources.Due to the persistency of deterioration, it has become a source of worry as the purpose of establishing university libraries in Nasarawa state will be defeated if deterioration of their information resources is not put on hold. This purpose may be achieved if the root causes of deterioration are identified and tackled. The desire to assess the causative environmental factors of deterioration of library information resources in Nasarawa state has created a knowledge gap. An attempt to fill the gap prompted this study.

Objectives of the Study

The general purpose of the study is to assess the causative factors of deterioration of information resources in university libraries in Nasarawa state. Specifically, the study is set to assess:

1. The types of library information resources that are prone to deterioration in university libraries in Nasarawa State.
2. The causes of environmental factors of deterioration of information resources in university libraries in Nasarawa State.

3. The challenges encountered in combating deterioration of information resources in university libraries in Nasarawa State.

Research Questions

This research sought to answer the following questions:

1. What types of information resources are prone to deterioration in university libraries in Nasarawa State?
2. What are the causes of environmental factors of deterioration of information resources in university libraries in Nasarawa State?
3. What are the challenges encountered in combating deterioration of information resources in university libraries in Nasarawa State?

Scope of the Study

The study covered the University Libraries in Nasarawa State such as the Federal University Library Lafia, Nasarawa state university library Keffi and Bingham university library Karu. The study was limited to assessment of agents of environmental factors of resource deterioration in university libraries in Nasarawa State other than any aspect of university libraries.

Review of Related Literature

A study was conducted by Akporhonor and Azonobi (2015) on the deterioration of serial materials in university libraries in South-South, Nigeria. The study revealed that serials deteriorate in university library as a result of brittleness, fragility, and tear and the type of serial materials that are prone to deterioration are newspapers, magazines, newsletters, students pojects etc. hence recommendations were made, these include various methods should be applied by parent institutions to curb deterioration of serials, appropriate instruction should be developed for monitoring good housekeeping practices and also inappropriate use of photocopier should be discouraged.

A similar study was conducted by Tsegba, Agbo and Angereke (2018) on the deterioration of non-print materials in University libraries in North Central Nigeria. The study revealed that the type of non-print materials available in university libraries in North Central Nigeria were, computers, servers, discs, flash, CD, VCD, DVDs, Digital video camera, CD-ROMs, plasma televisions, tape recorders, cassettes, slides, multi-media projectors. The study equally found that major causes of deterioration of non-print materials in the university libraries under study were poor ventilation, manhandling, exposure to dust, ultraviolet radiation, water, light, lack of proper maintenance, loss of data as a result of

system crash and technology obsolescence.

A study by Akor (2013) on the security management for prevention of book thefts in University libraries in Benue State University Library Makurdi, Benue State reported that the university library books are stolen and mutilated due to inadequate library materials, financial constraint and selfishness on the part of library users. And that various methods adopted for stealing and mutilating the library books include: tearing of book page(s) off, removing of the book jacket cover, hiding of books under their clothes and their pockets. The researcher recommended that university libraries should provide photocopying services to enable the library users photocopy books that are few in the library and provide adequate library materials to meet the information needs of users. In the same vein, Idris, Hassan and Abdul-Qadir (2013) researched on theft and mutilation of library materials in Kano University of Science and Technology Wudil, Kano, Nigeria. The findings revealed that a lot of factors such as lack of adequate funding and high cost of book were found to be related to theft and mutilation in the library. This in turn helps in bringing about the problems of training staffs and having experienced librarians.

Others resulted from the lack of photocopying facilities, inadequacy of books and other information materials and their corresponding high cost prompt stealing and mutilating library materials. Electronic security system as used in advanced countries of the world should be installed in academic libraries for improved monitoring of operations in the libraries; there is need to educate library users, give proper library orientation periodically for the users to acquaint the importance of books in education and how mutilation could be an obstacle to the importance of books in education and how mutilation could be an obstacle to the services rendered by libraries.

Another study was conducted by Ajav, Agor and Akorchur (2018) on theft and mutilation of information resources in Nasarawa State University library Keffi, to determine among other information resources prone to theft and mutilation and the challenges in combating the menace. The findings from the study revealed that: Nasarawa State university library collections comprise of both print and non-print resources and are prone to theft and mutilation; hiding of materials for future use, folding, painting and removing of portions in some material as well as overdue and sneaking away with the information material were some of the mode of theft and mutilation in the library. The findings further revealed that restricted lending services, searching users at exit, proper netting of windows and photocopying services constituted security measures employed in the studied library. However, lack of lending services to students, inadequate

functional modern security gadgets and inadequacy of staff on duty are some of the issues challenging the security services in the library.

A study by Olajide (2018) that some of the causes include lack of environmental sanitation of library surroundings, lack of trained preservators, faulty storage and book arrangement on the shelves, the library illumination etc. The study calls for collective responsibilities in order to rescue the library materials by abiding with library hygiene, the use of air conditioners to control reading room temperature, good ventilation, the use of right insecticides and the use of incandescent light that is least destructive. Window blinds and plastic coatings can be used to control direct sunlight. Training of the staff on books shelving is also advocated.

Methodology

The research adopted a descriptive survey research design. The study was conducted in Nasarawa State, Nigeria. The population of the study consisted of 115 library staff of the three university libraries in Nasarawa state. They include the professional, non-professional and supportive staff of the university libraries in the state. The Federal University library Lafia has 24 library staff; Nassarawa state University library Keffi has 57 staff and Bingham University Library Karu has 34 library staff. The research used purposive sampling technique to select the whole population (115) of library staff in the three university libraries. Because the number can be managed effectively for the purpose of this study. The instrument for data collection was a self-structured questionnaire titled: "Assessment of Causative Factors of Deterioration of Information Resources in University Libraries in Nasarawa State Questionnaire (ACFDIRULNSQ). The instrument was validated by three experts. The reliability of the instrument was determined after a trial test was carried out on Federal University of Agriculture Francis Suleimanu Idachaba Library Makurdi, Benue State which is not part of the population of the study. Forty-five (45) library staff responded. The area was chosen to test the instrument because it possesses the same characteristic of the area under study. The collated data was analyzed using Cronbach's Alpha formula. Cluster A, B, and C yielded coefficients of .810, .790, and .857 respectively. The instrument has a grand reliability coefficient of .89. Cronbach's Alpha coefficient was used because the instrument was in the form of a continuum rating. With these reliability coefficients, it was evident that the measurement items have a high measure of internal consistency for underlying constructs. The researchers employed research assistants and instruct them to help administer the questionnaire to the respondents alongside the researchers in order to achieve

high return of the questionnaire. The researchers used descriptive statistics involving percentages; mean and standard deviation to answer the research questions. A four-point rating scale was used. That is 4+3+2+1 = 10/4 = 2.50. Thus a decision point of 2.50 was set. Any item that has a mean of 2.50 and above stands to agree with statement, while all items that have mean scores below 2.50 disagree with the statement.

Data Analysis and Discussion

This section is concerned with data presentation, analysis, interpretation and discussion of findings. The presentation follows the sequence of the research questions answered.

Table 1: Types of information resources prone to deterioration

S/N	Information Resources Prone to Deterioration	Frequency		Percentage (%)		Decision
		YES	NO	YES	NO	
1	Atlases	100	15	86.9	13.1	YES
2	Books	100	15	86.9	13.1	YES
3	Compact disk like CD ROM	89	26	77.4	22.6	YES
4	Computer systems	110	5	95.7	4.3	YES
5	Databases	5	110	4.3	95.7	NO
6	Ephemerals	10	105	8.7	91.3	NO
7	Globes	8	107	7.0	93.0	NO
8	Internet connectivity	5	110	4.3	95.7	NO
9	Memory cards & Flash drives	110	5	95.7	4.3	YES
10	Microforms	102	13	88.7	11.3	YES
11	Photographs	107	8	93.0	7.0	YES
12	Serials publications	99	16	86.1	13.9	YES
13	Student's projects	110	5	95.7	4.3	YES

Source: Field work, 2021

Table 1 above shows the types of information resources that are prone to deterioration in University Libraries in Nasarawa State, Nigeria in Frequencies and Percentages. As revealed on the table except for items 5-8, other items (1, 2, 3, 4, 9, 10, 11, 12 and 13) have 'percentage yes' above the benchmark of 50% indicating the resources that are prone to deterioration in the libraries.

Table 2: Causes of environmental factors of deterioration of information resources

S/No	Environmental factors of Deterioration	N	Mean	SD	Decision
14	Dust causes deterioration of information resources	115	2.78	0.74	Agree
15	Excessive electrical light causes deterioration of information resources	115	2.64	0.86	Agree
16	Excessive Sun light rays causes deterioration of information resources	115	2.88	0.95	Agree
17	Poor storage facilities causes deterioration of information resources	115	2.69	0.70	Agree
18	Poor ventilation causes deterioration of information resources	115	2.95	0.97	Agree
19	Unpleasant Temperature causes deterioration of information resources	115	2.65	0.68	Agree
20	Unstable Relative humidity causes deterioration of information resources	115	2.86	0.75	Agree

Source: Field work, 2021

Analysis of data as presented on Table 2 shows the Mean responses on the causes of environmental factors of deterioration of information resources in university libraries in Nasarawa State with corresponding Standard Deviations values. Data presented on Table 2 revealed that the respondents agreed to all the items (14 - 20) with Mean values ranging from 2.65 to 2.95 which are above the benchmark of 2.50. The standard deviation values are close to each other (0.75 - 0.97) which indicate that the responses were from a homogenous group.

Table 3: Challenges encountered in combating deterioration of information resources

S/No	Challenges encountered in combating deterioration of information resources	N	Mean	SD	Decision
21	Inadequacy of professional to monitor the application of chemicals like insecticides, and air fresher in the library	115	3.24	0.99	Agree
22	Inadequate funds to back up preservation and conservation budgets in the library	115	3.20	0.97	Agree
23	Inadequate knowledge of the type and quality of paper and other components of library materials	115	2.98	0.82	Agree
24	Lack of any system for measuring air pollution in the library	115	3.09	0.89	Agree
25	Lack of comprehensive written policy to guide preservation and conservation activities	115	3.04	0.86	Agree
26	Lack of equipment to measure temperature and humidity	115	2.75	0.73	Agree
27	Lack of equipment to test the level of acidity of the library material	115	2.87	0.78	Agree
28	No effort to determine the chemical composition of the cleaning materials such as detergents used in the library	115	2.67	0.70	Agree
29	Poor maintenance culture	115	3.12	0.94	Agree
30	Poor storage facilities	115	2.88	0.80	Agree

Source: Field survey, 2021

Analysis of data as presented on Table 3 shows the mean responses on the challenges encountered in combating deterioration of information resources in university libraries in Nasarawa State with corresponding standard deviations. Data presented on Table 3 showed that the respondents agreed to all the items 21-30 with mean values ranging from 2.67 - 3.24 which are above the benchmark of 2.50. The standard deviation values are close to each other (0.70 - 0.99) which indicate that the responses were from a homogenous group.

Discussion of Findings

Based on the findings derived from the results of the study, the following were discussed. The first finding of the study revealed that, Atlases, books, compact disk like CD-ROM, Memory cards and Flash Drives, computer systems, Microforms, Photographs, serials publication and Sstudent's projects are the types

of information resources that are prone to deterioration inthe university libraries. This finding corroborate with that of Akporhonor and Azonob (2015) whose study on the deterioration of serial materials in university libraries in South South, Nigeria reported that the types of serial materials that are prone to deterioration are newspaper, magazines and newsletters. The finding is also in corroboration with that of Njoku, Uwakwe and Mbagwu (2015) who reported that material most frequently affected by deterioration included among others reference material, serials materials, professional textbooks and computer accessories. Further, the finding also corroborates with that of Ajav (2017) who investigated "the state of preservation and conservation of library resources in Nasarawa State Library Board and found that the available library resources which are mostly prone to deterioration arc the print materials. These print materials could be atlases, books, students' projects and serial publications like newspaper, magazines and newsletters. This finding as observed could be that a plethora of information resources in universities libraries in Nasarawa State are prone to deterioration.

Findings of the study as shown on Table 2 revealed the environmental factors that cause deterioration of information resources in university libraries to include: dust, excessive sun light rays, poor storage facilities, poor ventilation, unpleasant temperature, unstable relative humidity. This finding corroborate with that of Tsegba, Agbo and Angereke (2018) whose study on deterioration of non-print materials in university libraries in North Central Nigeria found the major causes of deterioration of non-print materials in university libraries to be poor ventilation, exposure to dust, ultraviolet radiation, light and lack of proper maintenance. The finding also corroborate with that of Osunride and Adetunla (2017) whose study on preservation and conservation of library materials in university libraries in south west, Nigeria reported that dust and particulate matter were the greatest causes of deterioration to library materials. Also in corroboration with this finding is the submission of Idris, Hassan and Abdul-Qadir (2013) who stated that some library materials like books become brittle on excessive exposure to sunlight or heat. Similarly, Olajide (2013) posit that prolonged exposure to ultra violet light causes paper to brittle and loss its strength. This finding as observed could be that environmental factors poses a great threat to the deterioration of library resources in University Libraries in Nasarawa State, Nigeria.

Finally, findings on the study as shown on Table 3 revealed the challenges encountered in combating deterioration of information resources in university libraries in Nasarawa State to include inadequacy of professional to monitor the application of chemicals like insecticides and air fresher in the library; inadequate

funds to back up preservation and conservation budgets in the library; inadequate knowledge of the type and quality of paper and other components of library materials; lack of any system for measuring air pollution in the library; lack of comprehensive written policy to guide preservation and conservation activities; lack of equipment to measure temperature and humidity; no effort to determine the chemical composition of the cleaning materials such as detergents used in the library; poor maintenance culture; and poor storage facilities. This finding is also in relation with that of Ajav (2017) who investigated the state of preservation and conservation of library resources in Nasarawa State Library Board and found that poor facilities, inadequate funding and lack of policy document were the constraints of effective preservation and conservation in the studied libraries.

Conclusion

Based on the findings of this study, it was concluded that a plethora of information resources (print and non-print materials) are prone to deterioration in University Libraries in Nasarawa State. If library information resources are not well kept, they cannot provide desired function because the most effective way to establish longevity of library materials is to prevent or retard deterioration.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Appropriate cleaning activities should be encouraged minimizing environmental factors of deterioration and the conservators should ensure constant maintenance of temperature and humidity in the library.
2. University libraries should not only strive to acquire materials but should ensure that the materials acquired are preserved and conserved in a usable condition for generations of users.
3. Libraries should be air-conditioned as its importance to conservation and preservation of library materials cannot be over-emphasized.
4. Though damage to library materials are sometimes unavoidable, but with careful preventive measures by university libraries, deterioration of the materials may be lessened or prevented as the old adage says “prevention is better the cure”

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