

Deterioration of Serial Materials in University Libraries in South-South, Nigeria

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Abstract

The study was carried out to determine the deterioration of serial materials in university libraries in South-South, Nigeria. Descriptive survey research design was adopted for this study. The study population comprised of 461 university librarians in seventeen selected university libraries from States of South-South, Nigeria. Three hundred and ten (310) librarians were used from the population of the study. The questionnaire was the only instrument used for data collection. Mean, standard deviation and frequency counts were used to analyze the data collected. 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 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.

Introduction

Deterioration of serials is not a new development, but attempts are being made by librarians to minimize it by preserving the intellectual contents in the library by copying them into another format (Minickal, 2012). Serials in the library must be taken care of or else they would deteriorate rapidly. It is therefore important that serials must be preserved so that they can be available to users when needed. The most basic task of preserving library materials is to ensure that they are regularly cleaned and dusted. This is because if library materials are allowed to gather dust, they will deteriorate rapidly (Aina, 2004).

Deterioration is a function of such factors as the chemical characteristics of the paper, the mechanical construction of the volume of storage conditions and intensity of use. Alegbeleye (2002) opined that archives and libraries are prone to disasters that can be classified generally as natural and manmade, which include lightening, rodents, flood, fire, war, earthquakes, and pest attacks. It is also in this regard that the usefulness of preservation cannot be overstressed in libraries today.

Literature Review

Deterioration is a change of original state of any material by interaction between the object and the factors of destruction. The different types of deterioration of serials are reflected in wear and tear, shrinkage, cracks, brittleness, warping, bioinfestation, discoloration, abrasion, hole, dust and dirt accumulation, etc (Netexam Study Guide for Library Science, 2009). Deterioration is a state of depreciation in value or in quality. Therefore, the deterioration of serials is known to be a state in which serial is depreciating in value as well as in quality. Deterioration begins the very day a material is invented or a book is published. The history of serial deterioration is as old as the history of book invention. It is a complex subject considering different materials used in making of prints and non-print serials in the library (Olajide, 2013). Deterioration is the loss of quality in serials which decreases their ability to perform their intended function.

Madu and Adeniran (2001) noted that the deterioration of serials is not a new phenomenon. It started with librarians and indeed, with the invention of printing press. The danger of destruction threatens not only research collections but also the world of knowledge they support. There are many causes of damage to library materials but perhaps the most important cause of damage is the deterioration which is as a result of poor quality and the acid content of papers which makes them brittle and deteriorates (Your Family Life Legacy, 2009). While some of the causes of the damage can be prevented through security measures and careful handling of archival materials, deterioration of library and archival materials needs to be prevented or reduced so that the lifespan of the library materials can be prolonged (Aina, 2004). Serials deteriorate for various reasons and the damage cannot be avoided it might arise from daily use. Recently, in particular, damage from serials is increasing rapidly and is becoming a major problem. Materials are also damaged by misuse such as cutting pieces off and writing on the pages. Turning a page violently, tossing or dropping materials, or reading while eating or drinking also poses risk (National Diet Library, 2008).

One reason collections deteriorate is "internal or inherent vice," caused by weakness in the chemical or physical makeup of an object introduced during its manufacture. This is the fundamental problem faced in the preservation of serials. For example, serials composed of wood pulp may turn yellow and brittle in just a short period of time. Some adhesives will dry out and fail, while others may discolor and turn into a sticky mass. Old

writing inks may seem to burn through a paper sheet, or, they may have faded and become illegible. These problems are due in part to internal vice, and they affect all types of serials in university libraries for example, roughly 33% of all research collections in university libraries are embrittled to some degree. There are, of course, a number of other contributors to serials deterioration, which can be labeled "external agents of deterioration." They include: physical handling, theft, vandalism, fire, water, pests, pollutants, light, and uncontrolled temperature and relative humidity (RH). These are risks that can be reduced or prevented by identifying, monitoring, and controlling them. The internal vice may not be done away with, but can slow the rate of deterioration and/or avert damage by controlling external risks (Willard Marriot Library, 2005; Densi, Mensah and Teye, 2013). Although there are various causes of deterioration of serials such as biological, environmental, human etc but all these contribute to the following sources of deterioration according to Reyden, n.d. Structural sources (Brittleness, fragility, split, tear, cut, trim), planar sources(Fold, dog-ear, crease, cockling, buckling, warp, wrinkling, dent etc), discoloration (Light degradation, oxidation stains, mat burn, wood burn, water stain) surface soiling (Dust, soot, smoke damage, embedded dirt, finger prints) , media (Flaking, cracking, abrasion, fading etc), surface damage (Delamination, skin, abrasion, scratch, scar and dull spot) and adhesive damage (Pressure sensitive adhesive tape, water-activated adhesive tape, heat-activated adhesive and adhesive residue).

Objectives of the study

The main objective of the study is find out the types of serials that are prone to deterioration in university libraries and the specific objective is to find out how serials have deteriorated in university libraries.

Research questions

- i. How deteriorated are serials in university libraries in South-South, Nigeria?
- ii. What types of serials are prone to deterioration in university libraries?

Methodology

The descriptive survey design was used for the study because it is appropriate to collect data from a large sample in order to describe how deteriorated serials are in the university library. The population consisted of 461 librarians which consist of 17 university libraries in the six (6) states of South-South, Nigeria. The university includes federal, state and private universities in South-South, Nigeria.

The sample of this study was 461 librarians, both male and female in 17 selected university libraries in the selected states in South-South, Nigeria.

The purposive sampling technique was used to select the university libraries. The purposive sampling technique was used because it enables the researcher to select the sample on the basis of specific characteristic or qualities (Nworgu, 2005). The use of the entire librarians conforms with the view of Egbule and Okobia (2001) that the entire population can be studied when the population is not large.

Sample size

Table 1

University Libraries	Number of librarians
University of Uyo Library, Uyo	28
Akwa-Ibom State University Library, Uyo	21
Obong University Library, Obong Ntak	9
Federal University Library, Otuoke	11
Niger-Delta University Library, Yenogoa	31
University of Calabar library, Calabar	67
Cross river State University Library (CRUTECH)	21
Delta State University Library, Abraka	47
Western Delta university, Library, Oghara	5
Novena University Library, Ogume	3
John Harris Library, University of Benin, Benin	81
Ambrose Ali University Library, Ekpoma	32
Benson Idahosa University Library, Benin	11
Igbinedion University Library, Okada	9
Donald Ekong Library, University of Portharcourt, Choba	43
River State University of Science and Technology Library (RSUST), Rumu	30
Ignatius Ajuru University of Education Library, Portharcourt	12
Total	461

Source: office of the university librarians

Procedure of Administration

The researcher adopted person-person method of questionnaire administration and collection with the help of two research assistants. Copies of the questionnaire were administered to four hundred and sixty-one (461) respondents in 17 selected university libraries in a person to person basis. The completed copies of the questionnaire were collected on the spot after administration. This ensured a high retrieval rate of distributed questionnaire.

Data Analysis

The data collected were analyzed using both descriptive statistics. The simple percentage was used to analyze the respondents' personal data, while the mean and standard was used to answer the research questions and criterion mean for this study was placed at 3.00.

Response rate

Table 2:

Name of Institution/Library	No. of Questionnaire Administered	No. of Questionnaire Retrieved	%of Questionnaire Retrieved
University of Uyo Library, Uyo	28	15	54%
Akwa-Ibom State University Library, Uyo	21	11	52%
Obong University Library, Obong Ntak	9	7	78%
Niger-Delta University Library, Yenogoa	31	20	65%
University of Calabar Library, Calabar	67	34	51%
Cross River State University Library, (CRUTECH)	21	15	71%
Delta State University Library, Abraka	47	30	64%
Westren Delta University Library, Oghara	5	5	100%
Novena University Library, Ogume	3	3	100%
John Harris Library, University of Benin, Benin	81	78	89%
Ambrose Ali University Library, Ekpoma	32	16	70%
Benson Idahosa University Library, Okada	11	10	91%
Igbinedion University Library, Okada	9	7	78%
Donald Ekong Library, University of Port-Harcourt, Choba	43	29	67%
Rivers State University of Science and Technology Library, (RSUST), Rumu	30	14	47%
Ignatius Ajuru University of Education Library, Port-Harcourt	12	7	58%
Total	461	310	67%

From Table 2, 461 copies of the questionnaire were administered and 310 copies were retrieved. The response rate of (67%) is considered adequate for the study because the standard and acceptable response rate for most studies is 60%.

Analysis of Personal Data

Table 3: Gender of the Respondents

Gender	Frequency	Percentage (%)
Male	146	47.1
Female	164	52.9
Total	310	100.0

Gender of the respondents show that 164 (52.9%) were female while 146 (47.1%) were male respondents. This study showed that there are more female librarians than male in the study.

Table 4: Age of the Respondents

Age	Frequency	Percentage (%)
25-30 years	139	44.8
35-40 years	98	31.6
40 years and above	73	23.5
Total	310	100.0

In analyzing the personal data of the respondents, the age of the respondents revealed the 139(44.8%) of the respondents were within the age bracket of 25-30 years, while 98(31.6%) fell within the range of 35-40 years and the remaining 73(23.5%) fell within the range of 40 years and above. This indicates that majority of the workforce of the libraries are younger librarians and more experienced in preservation. This in actual fact constitutes the age bracket of the active labour force in Nigeria (World Bank, 2000).

Table 5: Qualification of the Respondents

Qualification	Frequency	Percent (%)
B.Sc./B.LS	103	33.2
HND	84	27.1
PGD	51	16.5
M.Sc	60	19.4
Ph.D	12	3.9
Total	310	100.0

Based on the figure in the Table, 103(33.2%) respondents possess B.Sc or B.LS while 84(27.1%) respondents have HND. This suggests that 187(60.3%) out of 310 (39.7%) of the respondents are academically prepared for preservation. However, there are still other librarians with an M.Sc 60(19.4%), PGD 51(16.5%) and Ph.D 12(3.9%).

What types of serials are prone to deterioration in university libraries?

Table 6: Types of serials prone to deterioration in university libraries

TYPES	AGREED	PERCENTAGE %	DISAGREED	PERCENTAGE %	TOTAL	PERCENTAGE %
Journals	287	92.6	23	7.4	310	100
Newspapers	201	66.8	109	35.2	310	100
Magazines	179	57.7	131	42.3	310	100
Newsletters	216	69.7	94	30.3	310	100
Abstracts and indexes	70	22.6	240	77.4	310	100
Almanac and yearbooks	134	43.2	176	56.8	310	100
Annuals and Reviews	104	33.9	205	66.1	310	100
Directories	85	27.4	225	72.6	310	100

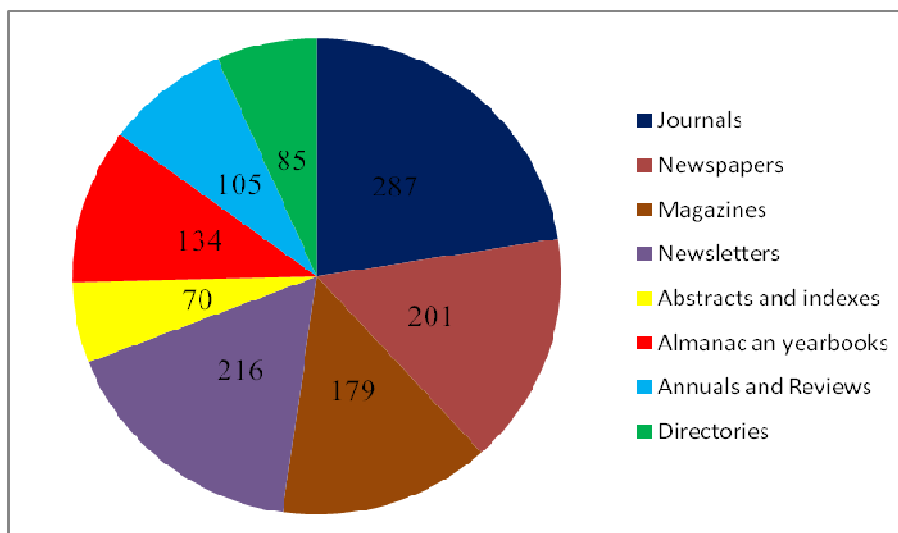


Figure 1: Showing the types of serials prone to deterioration in university libraries

Figure 1 indicates that Journals (287), Newsletters (216) and Newspapers (201) were the types of serials that are prone to deterioration in university libraries. This implies that serials (Journals, newsletters and newspapers) are deteriorating rapidly in university libraries and if not preserved, access to them by library users will diminish, thereby, making the aim of the serial section of the library defeated. This finding agrees with Your Family Life Legacy (2009) that newspapers, journals and newsletters deteriorate as a result of the acid content of papers which make it become brittle and deteriorate. Also corroborates with Densi, Mensah and Teye (2013) that in the face of the uncontrollably high environmental temperatures, high humidity and penetration of light, newspapers, journals and newsletters in the university libraries are liable to deterioration at a faster rate than expected.

How deteriorated are serials in university libraries in South-South, Nigeria?

Table 7: **Deterioration of Serials in university libraries**

Deterioration	Mean	Std. Deviation
Serials are deteriorated as a result of brittleness, fragility, split, tear, etc	4.21	1.02
Serials are deteriorated as a result of folding, dog-earing, crease, cockling, buckling, warp, etc	4.03	1.13
Serials are deteriorated as a result of light degradation, oxidation stains, mat burn, wood burn etc	3.99	1.14
Serials are deteriorated as a result of dust, soot, embedded dirt, finger prints, etc	4.09	0.92
Serials are deteriorated as a result of flaking, cracking, abrasion, fading, binder migration, etc	3.77	1.13
Serials are deteriorated as a result of delamination, scratch, dull spot, etc	3.72	1.04
Serials are deteriorated as a result of adhesive damage such as Pressure sensitive adhesive tape, water-activated adhesive tape, adhesive residue, etc	3.51	1.20
Average Mean/Std. Deviation	3.90	1.08

Criterion Mean= 3.00

Table 7 showed deterioration of serials in university libraries in South-South, Nigeria. With an average calculated mean of 3.90, which is greater than the criterion mean of 3.00, it was observed that the deterioration of serials in university library was as a result of brittleness, fragility, and tear with a mean score of 4.21 and standard deviation of 1.02 and another mean score of 4.09 and standard deviation 0.92 of the respondents agreed that deterioration of serials was as a result of dust, soot, embedded dirt and finger print. These high mean score and standard deviation suggests that deterioration of serials in university libraries was due to brittleness, fragility, tear and dust. This finding conforms to the findings of Faliaye and Isokpehi (2001) that found that Nigerian University libraries are full of large range of materials that are deteriorating and brittle. This finding also aligned with that of Olatokun (2008) which revealed that brittleness, fragility and tear were responsible for deterioration of serials in university libraries.

Conclusion and Recommendation

The study investigated the deterioration of serial materials in university libraries in South-South, Nigeria. From its finding, this study concludes that serials materials deteriorate as a result as a result of brittleness, fragility, and tear and the type of serial materials that are prone to deterioration are newspapers, magazines, newsletters etc. The recommendations made by the researcher in order to ameliorate the deterioration of serials include;

1. University libraries should consider various methods that could be applied to curb deterioration of serials
2. Appropriate instruction should be developed for monitoring good housekeeping practices and also inappropriate use of photocopier should be discouraged.

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