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# AN ASSESSMENT OF PRESERVATION ACTIVITIES IN SCHOOL LIBRARIES

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# AN ASSESSMENT OF PRESERVATION ACTIVITIES IN SCHOOL LIBRARIES

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## **ABSTRACT**

*The necessity of preservation activities in libraries cannot be over emphasized. Without preservation, no informative, educative, and historical materials of yester years cannot be made available for today's development. Libraries will not be in existence, serving their clientele, if their collections are not preserved. This research tries to evaluate the strength and weakness of preservation activities in school libraries, using Federal Government Academy, suleja as a case study. The investigation shows factors that cause deterioration of materials in school libraries, and it also tries to proffer solution via recommendation; and how the effects of these agents can be brought to zero level thereby increasing the life span of the materials available in the library.*

**KEYWORDS:** Preservation, libraries, School libraries, deterioration

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## **INTRODUCTION**

A school library is a place where teachers and students have access to a variety of information resources. Kolade (2001) stated that "the school library is the heart of the school with a wide variety of education media. These media include books, magazines, newspapers, recordings, maps, films, photographs and paintings, computer systems and audio and visual information materials such as television, video tape, camera, slide, Transparency, microforms (microfilms, microfiches, micro cards) and tape recorders for school projects". Library and education are two vital institutions of socialization and perpetuation of the human race. The two cannot be separated in an all-around development of human race. The provision of library services is therefore crucial and indispensable to both the primary and post primary educational system.

Every school needs a library; teachers and students need to use library information materials in the teaching and learning process. The achievement of a qualitative school's education program depends, to a great extent, on quick access to library information resources Adeniji, (2006).

Preservation and conservation of information materials ensure continued supply of information essential for documenting the history of a Nation and also aiding research. It is the view of many librarians in Nigeria and other countries that we owe as much responsibility to the future generation as we owe to our present clientele. Smith (2001) sees preservation as a major concern for librarians and documentarist. For a very long time in Africa, especially Nigeria, it is commonly difficult to accept the fact that large amount of documents and records are reaching the end of their natural life and the few years that they have left can only be prolonged by proper handling and careful storage.

Okegbola (2009) writing on the importance of preservation notes that aside from the historical and artistic values, the global economy is on the downward trend and developing countries such as Nigeria are adversely affected. Thus, replacement of destroyed materials becomes extremely difficult. Therefore, preserving this intellectual, cultural heritage becomes not only the academic commitment but also the moral responsibility of the librarians/information scientist, who are in charge of these repositories. Besides, proper dissemination of library materials is possible if the documents are in good and usable condition. This demand for the proper preservation of these library materials.

According to IFLA (2000) principles for the care and handling of library materials. The word preservation is often defined to include all the managerial, administrative, financial and staffing considerations necessary to specifically mean the provision of an appropriate level of security, environmental control, storage care and handling, which will retard further chemical deterioration and protect library material from physical damage. While some believe that preservation is as old as civilization, established in the idea that mankind learns what had happened in the past with the evidence of earlier times, is so vital and worth saving (preserving).

From the above, it is quite justifiable to say that conservation and preservation of library materials is as old as library itself. Retrospectively the history of libraries in the ancient period can be traced down to Egypt, Mesopotamia and Assyria. It takes us down to memory lane to see the attempts made to take care of recorded materials such as the clay tablets, etc. which had to be baked to ensure its ability to last long and to withstand harsh atmosphere. They went on to put

them into pots to safe guard them from unwanted visitors and possible mutilation. Paprivenlum and parchments were also rolled into pigeonholes or into a special container made just for that purpose. We can say that from the inception of libraries, the act of preserving recorded materials in any form was practiced. Recent development has shown that with the invention of printing, with facilities for duplication materials, libraries at a certain time relented in their effort of preserving materials. Some academic and special libraries that are not financially buoyant to replace some damaged materials and although some of their materials in these libraries mentioned did not cherish accommodating both outdated and current materials on their shelves. However, school and academic libraries from the onset had this role to play, in terms of preserving academic literature. This was guided by their role in preserving the cultural, economic, technological and other records of the nation. Therefore libraries and other institutions, whose collections serve as archival function, play a primary role in collecting and preserving the human record.

### **Statement of the Problem**

Deterioration of information resources in Nigerian secondary schools has been established in publications as a universal phenomenon. This research attempts to investigate the causative agents/factors responsible for the deterioration of materials in the selected geographical area, how it affects library services and also come up with possible solutions on how to preserve these materials.

### **Research Questions**

1. What are the types of materials available for preservation?
2. What are the factors responsible for the deterioration of library materials?
3. What is the extent of deterioration of library materials?
4. What are the methods used in the preservation of these materials?

### **LITERATURE REVIEW**

Preservation According to the online dictionary of library and information science (ODLIS) is prolonging the existence of library and archival materials by maintaining them in a condition suitable for use, either in their original form or in a form that is durable, through retention under proper environmental conditions and actions taken after a book or collection has been damaged to prevent further deterioration. The inference drew from the above source (ODLIS) shows that

materials can actually be preserved in their original state/form when the appropriate measures are taken to efficiently preserve them, thereby extending the life span of these materials.

According to IFLA principles for the care and handling of library materials (1999). The word “preservation” is often defined to include all the managerial, administrative, and financial and staffing consider the welfare of library collections. Preservation specifically means the provision of an appropriate level of security, environmental control; storage care and handling that will retard further chemical deterioration and protect library materials from physical damage.

Similarly, BOSALA, (2003) sees preservation as a generic term, and includes all activities associated with the maintenance of resources and the preservation of information content. This is in contrast with conservation, which refers to the physical items themselves in order to extend their usable life (and restoration, which refers to treating damaged material to bring to its near original condition).

Jordan, (2003) who shares a similar view with BOSALA, describes preservation as an umbrella term for an array of activities; principles, practices, and organizations that ensure the usability, longevity, and accessibility of recorded knowledge. Activities currently defining the realm of preservation of library materials include conservation (general collections, repair and special collections), reformatting (microfilming, photocopying, and digitization), selection for preservation, environmental monitoring and control, care and handling of materials, disaster preparedness and recovery, standards relating to materials, practice and techniques, commercial binding and preservation education and training.

Jordan, although elucidating in depth on preservation and giving an eye view of what conservation is and some activities involved in preservation, Baker, (2000) opined that preservation is the action taken to anticipate decay. Conservation is an act of preservation protecting and shielding materials from destructive influences that shorten their life span. Preservation as a collection management strategy has been relegated if not totally neglected by librarians and documentarists for a very long time in Africa, especially in Nigeria. Therefore, knowledge of the causes of deterioration of library information resources is very essential for librarians and others who are concerned about the preservation of information stored in books and non-book formats Varlamoff, (2005).

According to Isah, (2003) no librarian of today can shy away from the fact that “Information world” stands the imminent risk of losing so much of its valuable written heritage through the

over increasing deterioration of information resources. Preservation does not simply happen on its own; a well thought out plan must be drawn and managed. According to the fifth law of library science “library is a growing organism”. Libraries acquire materials of all kinds continuously, and promote the use of these acquired materials. Hence more and more number of users wants to access these materials. As more and more number of users use these materials, they are more likely to be damaged. To prevent this deterioration of materials which may affect the further retrieval of the contents, we need to adopt an away of appropriate management strategies.

## **CAUSES OF DETERIORATION**

### **1. PHYSICAL AGENTS**

- Temperature
- Relative humidity
- Light
- Sound (vibration)
- Magnetism

**Temperature:** In countries like Nigeria, the abundance sunlight poses a great problem. Because sunlight contains quite a high proportion of ultra-violet radiation which is so powerful as to induce degenerative chemical changes in organic material on which it is incident. Paper is mainly made up of cellulose which constitutes long chains of molecules made of carbon, hydrogen and oxygen. Ultra-violet radiation breaks up the links in the long molecular chains and thus brings about structural decay of paper. Heat, food and moisture are the three conditions for microbial growth and these accelerate the chemical deterioration of paper, leather, iron and textiles materials Madu and Adeniran, (2002). Cellulose fibers are deteriorated by hydrolysis that is, decomposition by chemical reaction with water, oxidation and photosynthesis and each of the processes is accelerated by heat in the presence of minute qualities of iron, copper and other impurities, which are always found in paper. However, low temperature and low humidity decreases the rate of deterioration. This implies that low temperature area in the library prolong the life span of library information resources. Moreover, Unomah, (2008) posited that most libraries in Nigeria have no air conditioners or fans to regulate the optimum temperature needed for proper preservation of library information resources. The strength of paper decreases and it gets discolored. Inks fade and printing becomes faint. The leather of book bindings tends to get

hard and brittle-ultra-violet rays of wavelength shorter than 300 mill microns are particularly detrimental to the cellulose of paper. It is desirable to prevent sunlight from falling directly on books and other library materials.

### **Physical Agents and their preventive measures**

- Proper ventilation should be maintained
- To control excess humidity install dehumidifiers, or placement of silica gel in appropriate places.
- Use sun filters, lead bulbs, acetate foils etc to control the powerful radiant light energy.
- Handle carefully the documents in the library while transporting from one position to another.

## **2. CHEMICAL AGENTS**

- Dust and dirt
- Internal acidity of paper and ink
- Air pollution and atmospheric

According to Gloria, (2009) unpublished work said modern papers made from wood contain some chemical or some acidic substance that are rather destructive. The advancement of machine made papers pose a problem to preservation of materials, which results to deterioration. While iron, it was observed that pollutants like dust, smoke, coke dust fly ash, salt particles, calcium, ammonium sulphate, nitrates, chlorides, solid, sulphur dioxide, ozone, olefins, aromatic hydrocarbons, aldehydes, ketones paraffins, hydrogen sulphide, halogen compounds and ammonia. All these factors lead to increase the acidity of the documents. De-acidification method can be used to remove the acid content and increase the longevity of documents. The library of congress estimates that de-acidification can prolong the life span of paper-based library materials by 250 to 300 years.

## **3. BIOLOGICAL AGENTS**

Biological agents thrive on the organic matter they find in library materials. Absence of proper ventilation, darkness, high temperature and relative humidity encourage their spread. The biological agents can be grouped into macro organisms and microorganisms.

### **Macro organisms**

There are many pesticides like (DDP: Pyrethrum; paradichloro benzene etc.) these pesticides may be sprayed periodically. There are agencies specialized in this area that may be consulted in case one has any specific problem.

**Book lice:** Dark dusty areas filled with unused books, dampness and warmth are essential requirements for the growth of booklice. They are gray or white in color. They injure the bindings of books by eating paste and glue and also eat the fungus formed in between the edges of inner cover of the books.

**Book worms or book beetles:** Bookworms affect very much books and manuscripts. As the name itself suggests they feed on paper and damage the paper extensively. In libraries the bookworms lay their eggs on the edges of the books and on the surface of the bookbinding. They make tunnels in the pages and boards of the books.

**Cockroaches:** Cockroaches are common all over the world which are brown or blackish brown in color. They eat paper leaves, book being, fabrics and other organic materials. They are frequently found in libraries, archives and museums and are very active during the night. They live in corners which are damp, cleavages in walls and floors, behind and beneath almirhas, shelves and in wooden cupboards. They excrete a dark brown liquid, which leave stains on the paper and become to remove.

**Termites:** Wet or damp conditions are most suitable places for termites. They eat wood and paper and can attack any type of material containing cellulose. If once they start destroying the books they can do irreparable damage in no time. They leave mud encrustation on the attacked materials.

**Rodents:** Rodents include mice, rats, squirrels and many other species. Mice and rats are mainly found in libraries and they find their way into buildings through dry drains and openings in doors and windows. In libraries they eat and destroy materials made up of paper, cloth, leather, glue, etc. These animals are very swift to move and hide in dark corners.

**Human factors:** Apart from physical and chemical factors, a serious cause of deterioration often is the casual attitude of the library staff as well as the users of the library towards books as physical objects. Librarians in charge of the documentary heritage and directly responsible for the overall conservation and preservation of their collections. But they are not always aware how to handle, store and use collections carefully to minimize damage and help preservation. The standard of care and handling of books by their custodians and users is often pretty low.



Improper storage, faulty repair, rough handling, deliberate abuse, folding the fore-edges of pages as a mark of reading, marking by ball pen, mutilation, vandalism are all examples of deterioration of books by human beings.

Inuwa, (2004) opined that the attitude of man the patrons, librarians/staff towards information materials and information resources. They contribute prime menace to library resources. The greatest enemy to library materials are the librarians who neglect their civic duties; in terms of efficient management system. The management system includes shelving, organizing, cataloguing and other entire preservation of materials. Afolabi, (2007) said some library staff usually mishandles library collection/resources in terms of shelving or transporting the books from one point to another (from the cataloguing section to the circulating or reference section). During the process transportation, some books may fall and disintegrate most especially those only glued at the spine. And when this occurs; it is always very difficult to mend and this makes the library spend money on what was not budgeted for. Godans, (2001) observed that other smart dreadful contributor are the patrons, most a times when they are allowed to go through some certain books and these books are not meant to be borrowed out they tend to be clever by vandalizing, tearing off some pages of such books putting them into their pockets and in most cases outright theft.

#### **4. ENVIRONMENTAL FACTORS**

**Light:** Whether natural light or artificial light, paper gets deteriorated when it is exposed to light. Materials, such as books and other paper-based information resources are light sensitive. Madu and Adeniran, (2002) opined in their publication that ultraviolet radiation and visible light cause fading, dislocation and embrittlement to library information resources. While incandescent light is least destructive, artificial light takes a little longer to deteriorate paper materials. While sunlight damages are minimized by reducing the quality of light falling on any of these information resources. The simplest way to block daylight is to block all windows with wood or masonry and resort to artificial light which is not always desirable. The quality of light transmitted by windows is controllable with tinted glass, curtains, shades and louvers.

Fading of ink and dye of the colored paper and yellowing of white paper also takes place due to the formation of oxycellulose. Artificial light like fluorescent tube light also radiates a high percentage of ultraviolet rays which cause deterioration by yellowing the paper. However, the amount of damage caused by light depends on the following factors. Intensity of light, instance

from the source of light etc. According to Sahoo, J. (2001) observed that as the intensity of light increases, the rate of deterioration of the paper also increases. The duration of exposure of paper to light is directly proportional to its deterioration; more the distance, less the damage.

**Humidity and moisture:** Humidity is the amount of moisture in the atmospheric air. The moisture is measured in terms of relative humidity. All organic objects absorb water to a greater or lower extent and the water goes inside the object through surrounding air. Because of this absorbency property, the paper absorbs more moisture when there is high humidity. Certain amount of humidity is necessary for the flexibility of paper but in prolonged high humid condition, paper becomes soggy and the moisture weakens the fiber of the paper. Moisture is the root cause of various types of physical, chemical and biological loose. It also weakens the sizing elements of paper and causes spreading of ink. Moisture also promotes the growth of fungus, which cause damage to paper and book binding materials.

### **Significance of the Study**

It is expected that findings of this study will be useful to the school management board. The librarian and the entire population. It will assist the school management to know the modern strategies for effective control and preservation of its library materials. Thus, saving cost of constant replacements of library materials.

Furthermore, it will help to place more value on the library materials available and improve the services of the library.

This research will also help other schools within the geographical region, on how to preserve their library resources

### **Methodology**

The survey design of research was adopted for the study. The major instrument used will be questionnaire. The estimated population of people in Suleja is about 280,000 to 300,000 given by the last census conducted in 2006 by National Population Commission. A total number of 20 questionnaires were administered and all were fully completed. The questionnaire is a structured one; with two sections (A & B). The section A has the bio-data of the respondent to be filled correctly. (Name, gender, qualification etc) section B has questions like what materials are available, how they are preserved, the atmospheric condition (temperature) etc. The data

collected from the questionnaire will be in a statistical form, that is, this would be analyzed using statistical method of percentage and presented in a tabular form

## PRESENTATION OF DATA

**Table 1: staff gender**

<b>GENDER</b>	<b>Response</b>	<b>Percentage %</b>
Male	10	50 %
Female	10	50 %
<b>Total</b>	<b>20</b>	<b>100</b>

The table above shows that 10 respondents representing (50%) were male staff while other 10 respondents representing (50%) were female. This shows that there is gender equality.

**Table 2: Qualification of staff**

<b>Qualification</b>	<b>Response</b>	<b>Percentage (%)</b>
School certificate	4	20
National Diploma	2	10
H.N.D	3	10
BLIS	8	40
BSc	3	20
<b>Total</b>	<b>20</b>	<b>100 %</b>

The table above shows that 4 respondents representing (20%) are school Certificate holders, 2 respondents representing (10%) are National Diploma holders, 3 other respondents presenting (10%) are Higher National Diploma holders, while 8 respondents representing (40%) are first Degree holders in Librarianship and 3 other respondents representing (20%) are Bachelor Degree holders in science. Thus, this shows that about (95 %) of the library staff is degree holders; this will bring sufficiency to a large extent.

**Table 3: working period in the library**

<b>Years</b>	<b>Response</b>	<b>Percentage (%)</b>
5-10	10	45
10-20	6	35
20-30	0	0
Less than 5 years	2	10
30 and above	2	10

<b>Total</b>	<b>20</b>	<b>100 %</b>
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Table above shows that 10 respondents representing (45%) have worked for about 5-10 years while 6 respondents representing (35%) have worked for about 10-20 years. 2 respondents representing (10%) are less than five (5) years, 2 other respondents representing (10%) are thirty (30) and above.

**Table 4: what are the factors that lead to deterioration of library materials?**

<b>Variable</b>	<b>Response</b>	<b>Percentage (%)</b>
External factors Physical agents Chemical agents Biological agents	10	70
Internal factors Temperature Relative humidity Light	6	30
Human factor, examples Mutilation Improper handling	4	10
<b>Total</b>	<b>20</b>	<b>100</b>

What are the factors responsible for the deterioration of library materials? The main elements of deterioration are external and internal factors, the actions of moisture, heat, light, photocopying, pollution, relative humidity, temperature, poor handling of information resources and biological agents such as insects, rodents, moulds, bacteria, fungi, natural disaster such as water, fire, earthquake, man such as theft, poor handling and storage. Apart from poor handling of information resources in perfect bindings in some libraries and archives, other factors include dust, light, rain, and flood.

**Table 5 what is the extent of deterioration of library materials?**

<b>Extent of deterioration</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Very Large Extent	10	50
Large Extent	5	30
Little Extent	3	15
Very Little Extent	2	5
<b>Total</b>	<b>20</b>	<b>100</b>

This question seeks to find out the extent of deterioration of library materials, Preservation is a crucial element in the process of managing information resources in the library. The aim of preservation is to prolong the life span of information resources. Yet several factors are responsible for the quick deterioration and decay of information resources in school libraries. Therefore, it is the responsibility of the school librarians/teacher librarians to see that their information resources are preserved for the maximal use of teachers, students and its communities. Those likely factors that are responsible for the loss of information resources in school libraries include environmental condition (atmospheric pollution, dust), high temperature, relative humidity, biological agents (sunlight, heat, ultraviolet rays), human agents ( library staff and the users) and both natural and artificial disaster (flood, fire, earthquakes, war, tornadoes, bomb blast, hurricane). It was observed that the level of deterioration in Federal Government Academy library, suleja, is at a large extent

**Table 6: what are the methods used in preservation of these materials?**

<b>Method of preservation</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Binding of library materials	8	40
Fumigation of library and the environment.	3	20
Constant checking of materials	2	10
Proper handling of materials	3	15
De-acidification	—	—
Ventilation	2	10
Computerization	2	5
<b>Total</b>	<b>20</b>	<b>100</b>

This question sought to find out the method of preservation at the Federal Government Academy library, suleja. It was revealed that binding of library materials, fumigation of the library environment, constant checking of materials, and proper ventilation are some of the methods embarked upon by the library management of Federal Government Academy, suleja, to preserve information materials. This is no doubt the intention of Cunha (2004), when he said we all have in our homes, certificates, employment references, family letters and ephemera of signature at works that we wish to preserve.

## **CONCLUSION AND RECOMMENDATION**

It can be concluded that preservation of information resources in selected school library in suleja, Niger State, Nigeria was given priorities as level of school management supports for

preservation of information resources was not efficient enough. The study also revealed that selected school library lack acquisition of journals and e-resources for the use of students while priorities were given to textbooks, fictions and encyclopedias. The level of staff training on preservation of information resources in the selected school libraries could be concluded as zero, as the study revealed that school library staffs were not given any opportunity for either inter-state training or international training on preservation of information resources in their different schools. There was also evidence of challenges facing

The preservation of information resources in the selected school library, such as inadequate infrastructures, absence of e-equipment for preservation e.g. computer system, scanning machine, photocopier etc. and adequate funding of the library.

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