PRESERVATION AMD SECURITY OF MEDIA MATERIALS IN LIBRARIES IN KADUNA, ZARIA AND JOS.

BY

DEBORAH I. A. BOYIS (MRS-)

May, 1995

PRESERVATION AND SECURITY OF MEDIA MATERIALS IN LIBRARIES IN KADUNA, ZARIA AND JOS.

BY

DEBORAH I.A. BOYIS (MRS.)

A THESIS SUBMITTED TO THE POST GRADUATE SCHOOL
AHMADU BELLO UNIVERSITY, ZARIA
IN PARTIAL FULFILMENT
OF THE REQUIREMENT FOR THE AWARD OF
THE DEGREE OF MASTER OF LIBRARY SCIENCE

DEPARTMENT OF LIBRARY SCIENCE
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY
ZARIA - NIGERIA

May, 19 9 5

DECLARATION

I Debora Boyis (Mrs.) declare that this thesis has been written by me and a record of my research work. It has not been presented in any application for a higher degree. All quotations are indicated by quotation marks and sources of information are specifically signified by means of references.



May 1995. Boyis, Deborah (Mrs.)

CERTIFICATION

This thesis entitled PRESERVATION AND SECURITY OF MEDIA MATERIALS IN LIBRARIES IN KADUNA, ZARIA AND JOS by Deborah Boyis meets the regulations governing the award of the degree of Master of Library Science of Ahmadu Bello University, and is approved for its contribution to Knowledge and literary presentation.

Mr. M.I.H Zia — Date
Chairman, Supervisory Committee

Dr. W. Arolabi — Date
Supervisory Committee Member

Prof. D. O. Bozimo — Date
Head of Department

Dean, Postgraduate School — DATE

D E D I C A T I O N

This work is dedicated to my parents, late Didam Ndap Kagoro and Ya'nat Didam.

A C K N O W L E D G E M E N T

I am grateful to my Lecturers and professional Colleagues who have enable me formulate my views on Preservation and Security of Media Materials in Libraries.

Special thanks are due to my Supervisors, Mr. Zia for his assistance too numerous to mention. Dr. M. Afolabi for his untiring assistance and encouraging me in the Library profession, which cannot be paid back. I wish also to thank the entire Graduate staff of the Department of Library and Information Science for the training and support given to me. I appreciate the strong arguments shared with Mr. Idachaba of Kashim Ibrahim Library on aspect of Preservation and Security of Media Materials.

I owe thanks to my employers, Kaduna Polytechnic for providing financial assistance and leave to enable this work to be completed. Thanks are due to Isa Kaita Library Staff especially the Polytechnic Librarian and his deputies who asked various questions that prompted my embarking on this work. I received much encouragement from other colleagues, such as Mr. G. Oladipo who patiently proff-read the scripts, Mr. O. Okoro who alerted me to the relevant sources of information and Mr. Emmanuel Nnamani who carefully typed my thesis, just to mention a few.

Final gratitude to my husband J. F. Boyis, my children Mike, Henry and Pamela for their support, without their full backing and relentless reminder this work would have not been possible.

Any success this work may enjoy is due to these efforts rather than mine. However, final responsibility for any error or omissions lies with the author. It is hoped that future support will be received from all of you mentioned as regard to future works.

ABBREVIATIONS

KIL	-	Kashim Ibrahim Library
LBKS	-	Library Board of Kaduna State
NAPRI	-	National Animal Production Research Institute
NARICT	-	National Research Institute for Chemical Technology
NETC	-	National Educational Technology Centre
NIPSS	-	Nigerian Institute for Policy and Strategic Studies
NITR	-	Nigerian Institute for Tryponosomiasis Research
NTA	-	Nigerian Television Authority
NTI	-	National Teachers Institute
UNIJOS	-	University of Jos.

DEFINITION OF TERMS USED IN THE STUDY

Terms that are commonly identified in the study are explained according to usage. The investigator borrowed confucious words in Ely (1968) that "If the Head of State were to ask one to take over the Government, what will one put first in the agenda. The answer, the one thing needed is the definition of terms. If terms are ill-defined, statements disagree with facts, and business is mismanaged ..... the people will not know foot or hand". From the above illustration, the investigator explained the terminologies as used in the study in alphabetical order:

Audio Visual: Materials that are used to help the learning process through hearing and seeing for example; the Television.

Brittleness: Loss of life-span of a particular Media such as Map.

Cellulose Materials: Chemical resistant Materials used for films.

Combustion: Rapid reproduction of heat through chemical reaction of equipment for example; Fans, projectors etc.

Computers: An information technology equipment that produces processed information for human consumption through:

a. Visual screen
b. Punch Card
c. Magnetic tapes and disc

Damaged: Poor quality of a Media due to the reduction of life span and safety for example; rust and discolouration of films.

Deterioration: See Damaged

Encapsulation: Laminating materials through sandwiching single sheets between layers of plastic support.

Formats: Various sizes and shapes of Media Materials usable in many ways.

Fumigation: A protective technique of deteriorated Media materials through the use of:

a. sprays

b. separate the damage materials for treatment.

Graphic Material: Media Materials that carry pictorial representation such as photographs.

Hardware: Equipment or machine used with accompanying materials to convey meaning.

Information Technology: New mechanical devices used to covey meaning with one another for example; computer.

Media handling: Processing and usage period of Media Materials by persons.

Media Material: It is a product of communication not dependable on the printed work, in form of Hardware such as Television; softable or graphic presentation e.g. Video Cassettes and photographs.

Microforms: Information reproduced from print to reduced film print to be readable under a machine control.

Preservation: The day to day Library operation and the therapeutic role given to Media Materials to obtain:

a. Life span

b. Usability through restoration

c. Security through well planned policies.

Restoration: An effort made to bring back the deteriorated items to a useable form.

Security: Protection of Media Material against the enemies reach, and creating policies to allow fare usage among clients such as:

a. Restrictions

b. Surveillance

c. Good building structure with devices

d. Insurance coverage.

Software: An accompanying material with the hardware for possible usage of the equipment for example; video cassettes.

Ultra Violet Lights: Direct sunlight and fluorescent light reactions on Media Materials through:

a. Bleaching

b. Fading to reduce their life-span.

ABSTRACT

The purpose of this study is to identify media services rendered and to establish preservation and securiiy problems facincing the libraries under study. The problems investigated include: Human causes, temperature, insects, dirt and dust, fungus, light, theft, fire and water.

The investigator used descriptive and comparative research methods to determine the similarities and differences in Preservation and Security of media materials in the libraries. The population covered the Libraries in Kaduna (Library Board of Kaduna State; Nigerian Institute for Trypanosomiasis Research; Nigerian Television Authority; National Teachers Institute and National Educational Technology Centre), Zaria (Kashim Ibrahim Library A.B.U; National Animal Production Research Institute; National Research Institute for Chemical Technology), Jos (University of Jos Library; National Institute for Policy and Strategic Studies Kuru).

Questionnaire was used as the major instrument for the study. Formal and informal interview and discussions with a number of visits were made. About fifty two questions were lorded with alternative answers to be selected. Descriptive statistics was used to explain the findings on Preservation and security of Media Materials in libraries under study. simple percentages, tables and graphic presentations were used to analyse the findings of the study.

It was found out in the findings that photographs and television equipment were the commonest services rendered in libraries under study and also experienced problems affecting their life span and safety of the media. The paramount

problem found among the libraries under study was human causes, and the least was fire and flood. Most damages affected photographs. Most Preservation and Security problems of media materials wore militated by physical and climatic conditions.

Among the recommendations arc that library building construction should be part of the Librarians planning.

TABLE OF CONTENTS

		PAGE
	Title Page	i
	Declaration	ii
	Certification	iii
	Dedication	iv
	Acknowledgement	v
	Abbreviations	vii
	Definition of terms	viii
	Abstract of Thesis	xi
	Table of contents	xiii
	List of Tables	xvii
	List of Figures	xviii
1.	CHAPTER I: INTRODUCTION	
1.1	Background to the Problem	1
1.2	Statement of the problem	3
1.3	Research questions	5
1.4	Assumptions	5
1.5	Objective of the Study	5
1.6	Scope of the Study	5
	REFERENCES	7
2.	CHAPTER II: REVIEW OF LITERATURE	8
2.1	Introduction	8
2.2	The Preservation of Media Materials	8
2.2.1	Library Building	8
2.2.2	Lights	9
2.2.3	Heat and Humidity	10
2.2.4	Fungal Attack	12
2.2.5	Insects and Pest	13
2.2.6	Dirt and Dust	14

PAGE

2.2.7 Human Causes 15
2.3 Security of Media Materials and Measures .. 16
2.3.1 Theft and Buildings 17
2.3.2 Damage by Fire 18
2.3.3 Flood (Water) 19
2.3.4 Insurance 19
2.3.5 Closed Access 20
2.3.6 Surveillance 21
2.4 Summary 21
REFERENCES 23

3. CHAPTER III: METHODOLOGY 26
3.1 Introduction 26
3.2 Research Method 26
3.3 Population of Study 26
3.4 Instrumentation 27
3.5 Procedure for collecting data 27
3.6 Procedure for analysing data 28
REFERENCES 30

4. CHAPTER IV: ANALYSIS AND INTERPRETATION OF DATA AND FINDINGS 31
4.1 Introduction 31
4.1.1 Staff strength 31
4.2 Media Materials available in Libraries under study 31
4.3 Preservation problems 36
4.3.1 The Building 36
4.3.2 Damage by light 37
4.3.3 Excessive temperature and humidity 37

PAGE

4.3.4	Damage by fungus	38
4.3.5	Damage by Insects	39
4.3.6	Damage by Dirt and Dust	40
4.3.7	Human Causes	41
4.4	Security Problems	42
4.4.1	Theft and Buildings	42
4.4.2	Entrances of Thieves in Buildings	43
4.4.3	Anti Burglary protection	44
4.4.4	Fire	44
4.4.5	Duty periods of Electricians	45
4.4.6	Fire extinguishers	46
4.4.7	Flood	46
4.5	Comparison of Preservation and Security threats to media materials	47
4.5.1	Rank order (commonest) of gravity of of problems among libraries	50
4.5.2	Ranking of highest to lowest problems	52
4.6	Preservation and Security of Media Materials practises and measures for improvement in Libraries under study	57
4.6.1	Storage	57
4.6.2	Staff training	58
4.6.3	Maintenance and repairs of media equipment	59
4.6.4	Insurance coverage in Libraries	60
4.6.5	Closed access	61
4.6.6	Surveillance in Libraries	61
	REFERENCES	63

PAGE

5. CHAPTER V: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS 64

5.1 Introduction 64

5.2 Summary of findings 64

5.3 Conclusion 66

5.4 Recommendations 68

5.4.1 Suggestions for Further Research 71

REFERENCES 72

BIBLIOGRAPHY 73

APPENDIX 1: Questionnaire 77

APPENDIX 2: Investigator's letter . 90

APPENDIX 3: Introductory letter from the investigator's Head of Department 91

LIST OF TABLES

TABLE:		PAGE
1.	Software of Media available in Libraries under study	33
2.	Hardware (equipment) available in Libraries under study	34
3.	Library building	36
4.	Damage by light	37
5.	Cooling systems available in Libraries	37
6.	Extent of Damage by Fungus	38
7.	Damage by insect	39
8.	Protection against dirt and dust	40
9.	Damage through Handling	41
10.	Experience of theft in Libraries	42
11.	Entrance of the theft	43
12.	Anti-bulglary protection	44
13.	Duty hours for electricians (fire)	45
14.	Staff awareness	46
15.	Entrances of water	46
16.	Prevalent enemies of Preservation and Security of Media materials in Libraries under study	47
17.	Rank order of Gravity of problems	50
18.	Ranking of problems; (highest to lowest)	52
19.	Storage facilities	57
20.	Staff Training	58
21.	Maintenance and repairs of Media equipments	59
22.	Insurance coverage	60
23.	Restrictions of use of Media Materials	61
24.	Surveillance in Library exit	61

LIST OF FIGURES

FIGURES: PAGE

1. Histogram of percentage occurrence of each problem 54

2. Bar chart showing the magnitude of problems affecting Media Materials Preservation and Security in Libraries under study 55

Chapter 1

INTRODUCTION

1.1 Background to the Problem

Development in the area of information is produced in various formats other than the book called media materials. These materials can be categorised into two broad areas; projected and non project media. Projected media include film, film strips, slides, overhead transparencies etc. Non projected media include photographs, pictures, audio media, graphic materials etc. The main difference between projected and non-projected media is that one requires the use of projection equipment, and the other does not. Most are manufactured in form of plastic, polyester, triacetate or polythene material form.

The book as an informative media is one of the longest and widely known in libraries. The difference with media materials is being single medium and paper product. It does not use electric power to transmit knowledge. It is similar because of its objective to inform, educate and recreate. Therefore, emphasis will be made on media materials only.

Ely (1968:1) has been an established authority in the field of media materials. He emphasised on simple rationale for incorporating media formats into library collection. These should be in libraries because they are formats in which information is stored, transmitted and used. Virtually all observed literature dealing with rationale of media material usage have been written in professional journals, with comparatively few found in library literature. It is logical therefore that all justification presented in education would be appropriate to library users. These are based on research findings; further explained by

Chisholm in Ely (1968:3), that all persons learn in different modes, some learn effectively through the sense of sight and some through hearing. Therefore, the more alternative mode of learning the more likely that clients will learn with optimum effectiveness. In this regard media materials have other advantages such as using a film to see the impossible or unseeable with the human eye. It captures reality, such as observing in a video or film, how a bullet enters and leaves an object. It makes it possible for inanimate things to move. Foreign cultures and technology are shown. Effective teaching and instruction is given either on individual or small and large groups. Some of its disadvantages include obsolescence of machines as equipments are manufactured every time, media material cost and difficulty in maintenance and repairs. It especially builds up heat when in use. Software accompanying the equipment are sometimes incompatible. Careless handling damages the media materials. Therefore, an area of exploration in the work is Preservation and Security of these materials, which becomes a problem - in libraries.

The 1990s is a decade of consolidation rather than expansion of libraries. According to Harvey (1993:6) libraries now are turning their attention to the collection that they have rather than the collection that they would want to have. As budget shrinks and the cost of media or learning materials escalates, librarians are obliged to see that their existing stock last as long as possible. Thus the Preservation and Security of media materials have become a primary concern in libraries as part of the job of every library staff.

Vernon Clapp, William Barrow, Frazer Poole and George Cunha did the ground work in investigating and analysing the activity

that led to Preservation and Security movement, declared Harvey (1993:10). These concepts derived fundamental principles from the tradition of book conservation. The term Preservation in this context is the care given to the non traditional library materials to ensure longer life span. This cannot be achieved without providing adequate structures that house the collection, storage facilities for various medium, effective and efficient staff, adapting maintenance and repair culture, adequate control of the environment especially in the tropics.

Security is part of Preservation in achieving goals. It ensures safety and protects media materials from the enemy's reach. Caution and restraint are characteristics of Security (Gandert (1978:180). Therefore, measures are taken as preventive on enemies such as theft, fire,flood etc. Obviously all things decay, but understanding what hastens deterioration enables librarians to prolong the life span and safety of these materials. Media materials are noted to be sensitive to atmospheric conditions and therefore their stability is influenced by effective Preservation and Security programmes.

1.2 Statement of the Problem

Media materials have been neglected in pursuit of more print materials in many Nigerian libraries. The situation is a serious one in that most media materials, especially equipment are imported.

Tropical areas are exposed to cruel climatic conditions and this media materials deteriorate quickly (Banks, 1968:180). Library materials including media deteriorate faster in developed countries. Alegbeleye (1990:1) made a contrast in his work that six million out of seventeen million volumes of Library materials in Library of Congress, United States of America have reached

advanced stages of deterioration. This shows that the situation is a global concern and needs to be redirected in this study.

One of the problems of Security and Preservation of media materials as observed by Byrnes (1992:57) is financial. As rising prices and fallen budgets have forced Libraries to consider replacement of library stock. Therefore in developed countries, to preserve only three million of estimated seventy-five damaged media materials in research libraries will cost approximately two hundred million dollars over the next ten to fifteen years. The magnitude of the problem is that efforts must be redoubled to find practical, effective and realistic means of media materials in all sectors of library and information services.

Preservation and Security practices in libraries encourages the use of library materials including media. Therefore, if media materials are not cared for and secured for use, they wither and become irreparable. In connection to that, Kiekeguard (1983) observed that "he who wants to present a corrective measure must know thoroughly what the existing weaknesses are."

. However, preliminary visits to some of these libraries by the investigator revealed some areas of inadequacies in the Preservation and Security of media materials. For instance, in some of the libraries, it was discovered that there were no air conditioners to regulate the temperature in the rooms in which the media materials were housed. Evidence of Security threat to media materials were also observed in some libraries, such as broken doors by thieves who moved away media materials.

This study therefore sets out to investigate the extent of Preservation of Security problems in the libraries chosen with a view to improve on these aspects of their jobs.

1.3 Research Questions

This study is seeking answers to the following specific questions:-

i. To What extent are media materials available for services in libraries being studied?

ii. What problems threaten media materials Preservation and Security?

iii. What kind of Preservation and Security threats are most prevalent among libraries under study?

iv. What practices and measures could be adopted to effect longer life span and safety of media materials in libraries?

1.4 Assumptions

1. Media materials contain information that is useful to library users.

2. Preserving and Securing of media materials will prolong their life span, and safety.

1.5 Objectives of the Study

The specific objectives of the study are as follows:-

i. To identify media materials available for services in libraries under study.

ii. To identify problems threatening media material Preservation and Security in the libraries.

iii. To compare and contrast the extent of problems of media material Preservation and Security in libraries.

iv. To determine various methods, practices and recommend ways of solving the problems of media material Preservation and Security in libraries.

1.6 Scope of the Study

The study covered libraries in Kaduna, Zaria and Jos. The libraries includes the National Teachers Institute Library, Zaria

Road, Kaduna; National Educational Technology Centre, Zaria Road, Kaduna; The Nigerian Television Authority, Yakubu Gowon Way, Kaduna; Nigerian Institute for Trypanosomiasis Research, Kaduna; Library Board of Kaduna State, Bida Road, Kaduna; Kashim Ibrahim Library; Ahmamdu Bello University, Zaria; NAPRI and NARICT. The libraries of University of Jos, National Institute for Policy and Strategic Studies Kuru near Jos, Plateau State. These libraries represents the identity of Academic, Public, and Special Libraries. Among others, the investigator also found out that all media software and hardware in the libraries studied were covered by this study.

References

Alegbeleye, G.O (1990) Conservation and Preservation of Library, Archival and Museum materials:
A Keynote address at the Nigerian Library Association Conference, Yola.

Banks, Paul N. (1978) Preservation of Library Materials in Encyclopedia of Library and Information Science, Vol. 23, New York: Dekker.

Byrnes, Margaret (1992) Preservation and Collection Management: Some Common concern in the collection building reader.
New York: Neal Schuman.

Ely, Donald P. (1968) "The Changing role of Audio Visual process in Education: a definition and glossary of guide to Audio Visual terminology, the EPIE Forum, (6).

Gandert, Richard (1982) "Protecting your collection: a handbook, survey and guide for the Security of rare books, manuscripts, archives, and works of art" in Library and Archival Security, 4 (1/2).

Harvey, Ross (1993) Preservation in Libraries: Principles, strategies and practices for Librarians, London: Bowker Keekeguard, Soren (1983) in Richard Gandert. "Protecting your collection: a handbook, survey and guide for the Security of rare books, manuscripts, archives, and works of arts" in Library and Archival Security 4 (1/2).

Chapter 2

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter attempts to examine literature, periodical articles published and unpublished papers relevant and most directly related to the topic of research. Feather (1989:23) observed Preservation and Security as professional issues for modern librarianship in the '90s'. This provides an overview of media materials Preservation and Security in libraries: its current concerns, and solutions to address the problems. In that aspect, researches done by others in various countries could be applicable to Nigerian situation. This will help to fashion out the prevailing situations. The chapter intends to review significant article concerning the causes and effect to media materials deterioration in libraries and ideal practices to alleviate the problems.

2.2 The Preservation of Media Materials

2.2.1 Library Building

Based on literature surveyed, it is the investigator's view that effective Preservation and Security of media materials starts right from the planning stage of the building. This is because every library building or unit is planned according to the institutional needs as to the kind of work to be done, and the community to be served.

It was for this reason Bank (1974:339), Holt (1985:76), McAdams (1987:10), Bennett (1987:317) and Dubin (1987:1) said it is a challenge for the new technology as a creation of impact on the buildings in terms of power distribution, storage, user space and automation.

Furthermore, libraries are growing organisms and their collections range far beyond the books that many buildings were originally constructed to house.

Relatedly, Hemphills (1987:292) assumed some libraries to have separate and newly constructed buildings or changing faces of buildings which he calls the 3RS; as Re-arrangement, Retrofit and Rehabilitation. This, actually, has been a break through in terms of the researchers study to find out buildings with such characteristics.

In a similar development, Horton (1969:7) revealed that the problems buildings cause through bad electrical fittings etc., with ineffective materials housed in the building, there would be an increased deterioration. For this reason appropriate electrical fittings are necessary for safety and effective Preservation.

Fadola (1990:1) in a recent paper on the Preservation of non-print materials gave an example of Nigerian Broadcasting Libraries in Lagos. Some years back they housed media materials in makeshift buildings or apartments not originally designed as libraries. This he said constituted an impediment to proper storage and effective Preservation.

It is worth finding out the situation in other Nigerian libraries especially those in Kaduna, Zaria and Jos.

2.2.2 **Lights**

Sunlight and fluorescent lighting are the primary sources of ultraviolet radiation in libraries. This is related to the library buildings. Okata (1990:1) identified ultraviolet lights as important to libraries. This is because the rays gives high kilocalories of energy. It reactivates the acidic and metallic salts in the atmosphere, which in the presence of other agents

like moisture brings about photo-chemical reactions. This leads to the breaking of chemical bonds, thus setting in the process of deterioration. Therefore, media materials such as charts and films are destroyed.

In another study by Buchberg (1983:35) the radiant energy as Okata stated, can cause chemical changes and damage objects. For this reason ultraviolet rays contribute to cellulose degradation that causes fading of certain pigments and dyes. This is restored by storing items in folders, boxes and providing window blinds, ultraviolet films or rollers to the windows. It has been observed that the films' life span of effectiveness is two years.

Cunha (1983:33) in a related development stressed the effect of natural and artificial light on manuscripts and pictures (paper type materials). This in effect result in bleaching the ink on the paper. The deteriorating stage is reported as brittleness and loss of strength of the materials. To control or restore is through construction of adequate buildings, windows, doors and other fittings. Bulbs could be covered with ultraviolet filtering coverings. In a similar study, Hammeen (1978:1) noted that library windows are usually shaded to reduce glare. Therefore, fluorescent bulbs not coated with ultraviolet filters leads to a speedy deterioration of materials.

The following issues, though serious on media materials are not substantiated, however, they are worth looking into.

2.2.3 Excessive Heat and Humidity

Nigeria being a tropical country experiences longer periods of hot temperature than cold. This is a fact, extreme heat and humidity is to a large extent responsible for media material deterioration.

Fadola (1990:3) in a paper on "Preservation of non-print materials in broadcasting libraries in Nigeria", pointed out that if media materials (like films, film strips, video/audio tapes and cassettes) are subjected to excessive heat, they lose their finite components, phonographic recordings get bent, photographs and slides get discoloured. When they are exposed to high humidity, they cause dampness, growth of moulds and sticking together to frames. To restore is to store all media materials under control temperature i.e. using Air Conditioners.

According to Sloan (1979:1) in a related survey, films consist of nitrate, acety cellulose polyester and adhesive layer gelantin or emulsion. He observed that nitrate films in its severe deteriorating stage is liable to spontaneous combustion at very hot temperatures. Deteriorating stages were identified as discoloration, acidic odour and stickness. Acetate films may shrink as a result of distortion of image. To protect films against excessive temperatures and humidity, silica gel or calcium chloride are placed within individual storage cabinet. This is used to absorbed moisture as it requires reactivation by heating. Another method of Preservation is by copying on triacetate stock. Eastman Kodak (1976:20) stated that when it reaches extreme deteriorating stage, it turns to powder which becomes dangerous if burnt; but should be taken back to the company for proper disposal.

Williams (1977:3) in a related study discovered that in sound recordings, suitable temperature minimises deterioration caused by oxidation. But low humidity prevents the growth of fungus, when fungus is identified. Relaxed and warping occurs thereby making extreme low temperature harmful. In another dimension, sound recordings weakens through fluctuation of temperature by switching

off air conditioners in the night and switching them on in the day time. This also causes contraction in tapes and disc warping. For restoration, same condition is used with slides i.e. producing colour mask to retain the colour.

White (1980:38) in a similar study identified other information storage medium (such as the computer punch cards, magnetic tapes, magnetic disc etc.) that deteriorate through extreme temperature and humidity.

This happens after moisture is absorbed by them, they jam and malfunction at operating speeds. In order to prevent this, magnetic tapes are to be copied once every six to ten years to avoid loss. Suitable temperature and humidity are required, but Thermometers and hygrometers could be used to control extreme climatic condition.

2.2.4 **Fungal Attacks**

Hot and humid conditions already discussed can directly stimulate the growth of fungus on media materials.

Sundt (1982:37) in his survey, discovered that dark fading found in colour slides is due to reactions to excessive temperature and humidity. It deteriorates when moisture condenses on the film and persistence fungus begins to grow causing permanent damage on the image. For prevention, the slide should be stored at a low temperature with controlled humidity. Slides can last for fifty years if well preserved.

In another development, Barnes-Cope (1989:9) an expert in Preservation observed the existence of fungi through extreme temperatures. He further analysed that fungi prefer to grow in acidic conditions and that many bacteria prefer neutral or faintly alkaline conditions. Consequently, it is generally agreed that temperature governs the rate of microbial growth. To restore the

materials, it is recommended that affected areas are brushed off or taken to a store with the use of chemical fungicides. Clearing solvent might be used on microforms with a soft cloth. Regular cleaning is needed.

2.2.5 Insects and Pests

Insects are invertebrates and they are the only member of this class that can fly and are enemies of media resources.

Cunha (1983:56) described insect in his study as a tropical phenomena, because of the warm climate which enhances the breeding of insects such as cockroaches, termites etc. He further described rodents or pests as lower animals who destroy library materials, such as rats, mouse etc. Once they are established in a building, they are difficult to exterminate.

Parker (1986:23) in another paper described cockroaches or insects as not only destroyers of media materials but also disease carriers. They are noted to stick their eggs to surfaces of furniture, print and non-print media etc. They feed through the materials (through chewing and eventually stain some documents with black fluid from their mouths especially in the night) therefore deteriorates the materials.

In a similar development, Ojo-Igbimoba (1990:1) recommends the protection against insects through good housekeeping of absolute neatness. Materials to be encapsulated as a Preservation strategy, is by sandwiching single sheets items between layers of an inert plastic. The two layers of the plastic support the item and allowed it to be handled and seen at both sides (lamination method). this is because insects feed on gelatin emulsion and food should not be eaten in libraries.

Okata (1990:1) in his paper "causes of the deteriorating of library and archival materials in Nigeria" stressed the urination of rats as one of the causes.

In a related field, Cunha (1983:16) found out that rodents exist all over the world. They are also noted to eat paper, leather, glue and paste. He discovered that they are mostly found in old buildings. He estimated that as much as 20% of world's books and other media materials have been destroyed by rodents. To prevent, is through fumigation and avoidance of spill foods, particles, dark and damp basement.

It is hoped that these experiences and methods being used by libraries are not the only ones. The investigator will rather, find out measures being taken by Nigerian libraries to combat the large variety of insects that attack media materials, especially photographs.

2.2.6 Dirt and Dust

Geographical areas accompanied with sand dunes, wind and air pollutants are liable to have serious deteriorating effects on the media materials.

Plumbe (1966) reported on the concentration of particles of flying sand, that even in the middle of the day, the sun may be blotted out and midnight darkness prevails. This actually has an effect especially on papers and other media materials.

In a similar study conducted by Okoye-Ikonta (1980:1), that University of Maiduguri Library lost periodicals due to that effect of dust as at 1979. All the hard and software are susceptible to contamination by dust and dirt. Therefore, both tapes and disc can be damaged by causing dropouts which agrees with McWilliams (1977:163) survey. He further explained that there is temporary loss of signal from tape during playback.

Swartzburg (1983:8) in a related development observed air quality as an important aspect in the Preservation of media materials. He noted that rural areas run a lesser risk than urban areas where high level of ozone and sulphur dioxide among other gases cause cellulose materials to deteriorate. In order to restore or prevent; scrupulous housekeeping is to be reinforced, spray cleaners or alcohol solutions to be used. Packaging is to be done to prevent dust from machines. Restoration could also be through climatic control although expensive.

The effects of dust and dirts are more devastating on non-print materials than print materials.

2.2.7 Human Causes

This is based on the inadequacies in staff attitudes, poor handling, maintenance on the part of the staff and users of media materials.

Salisu (1988:1) traces the problem of Preservation to the doorsteps of our training institutions. Thus, he observed that an acute shortage of non-availability of librarians trained in Preservation work constitute an impediment to library operations. He found out that a trial and error approach to Preservation is often adopted. For that reason, the damage resulting from such approach is better imagined than seen.

Omoniwa (1986:15) identified three factors that affects Preservation of materials as; attitude to public property; lack of commitment of staff to their duties; and non functioning facilities. In a similar trend, Okata (1990:8) enumerated more destruction of media materials handling by man. This is either as a staff or user by leaving clips and pins for long period which later rust and stains the paper or photograph. Other destructions by users include markings, underlining sentences with pens,

picture of chart cuttings and wrong shelving. Because of its magnitude, he calls it "vandal syndrome", of which most library staff and users are guilty of.

In relation to the foregoing problem, Fadola (1990:6) stressed that even the producers of media materials know about the impediments that cassettes, tapes, phono-records etc. bring. They are kept in odd places like car boots, table drawers, and stuffy offices for weeks. As such they are exposed to excessive heat and sunlight, their life spans reduce. Deterioration therefore could appear as picture tearing poor technical qualities of programmes, scratches and discoloured materials.

Barker (1981:193) in a similar study observed the statistics of Nigerian libraries on the use of media collections. That increased usage through touching with dirty hands, oily hands, frequent dubbing or photocopying damages media materials. To restore, laboratory experiment is used on photograph stains. As such encapsulation is used on materials in high use.

Sargent (1974:135) in handling media materials, similarly stated that the average life span of a video tape is two years, and damage is easily identified through negligence. To restore media materials, instructions accompanying the materials should be strictly followed, and video tapes of Archival quality should be rewound annually and immediately after viewing. User education is to be emphasised on the staff and the users.

The danger in this case threatens not only media materials, but the world of scholarship, research and accumulated knowledge which the materials support.

2.3 Security of Media Materials

Library Security is a field in which the problems are as diverse as they are numerous. It is the investigator's intention

to identify among other things, the safety measures adopted for media materials in libraries for equal opportunity of use and for posterity. This could be seen through finding against illegal removal, suitable building, precaution against fire and flood etc.

2.3.1 Theft and Buildings

Theft is a growing industry, a crime in which there is negligible risk exposure. Gandert (1982:101) in a survey conducted, spoke on the soar figures of manuscripts and other specialized collections which are over twelve thousand lost, through theft at the Metro Toronto Library each year.

Goje (1986:1) in a similar study attributed theft of library materials in public and school libraries to poor services to users. He significantly pointed out poor Security, lack of knowledge of readers and lack of informative materials. The methods used to execute theft as described by Afolabi (1990:4) are throwing library materials out of windows; illegal discharge of materials, mutilation and using chemicals to clean ownership stamps, user collaboration with library staff; removing books by the staff before they are processed and destroying records when borrowed. These reactions he said were attributed to economic, social and political factors.

In a related study by Whitter (1979:22) observed that sometimes thefts are carried out by persons of impeccable credentials. He described a report some years back in New York Times, that a special education counsellor with a Doctorate degree was arrested for having stolen historical items valued $250,000.

Horton (1969:29) in an article cleaning and preserving buildings described the problems buildings caused as a result of theft. He explained that buildings not designed with Security in mind lacked the quality for public utilities. To avoid

deterioration of media materials, Security must be given a priority.

2.3.2 Damage by Fire

Fire has remained an ancient scourge in libraries. Alegbeleye (1990) in a study discussed on how libraries provide an environment for fire to develop. Although papers and films are combustible matter. He further illustrated that high temperature can accelerate flame. One of the libraries which has suffered fire defects according to literature, in Nigeria include Nigeria Institute for Policy and Strategic Studies, Kuru, Jos.

It was reported in a newspaper article by Adekunle (1987:2) a representative of fire Protection Association of Nigeria. Investigation has revealed that most fire disasters in various parts of the world including Nigeria were started by cigarette smoking butt, left carelessly. He gave statistics of total direct damage done to property in Nigeria by careless cigarette smokers which has increased to more than N1.6 billion. In recent analysis of major fire outbreak shows that 80% of them were caused by smoking and electrical faults.

Fadola (1990:3) in a related study gave an example of media libraries that caught fire with media materials worth thousands of Naira. These libraries include the Ghana Broadcasting Corporation Library, burnt down to ashes. The Lagos State Television Library also got burnt down. These could be prevented through fire fighting equipment and disaster preparedness, such as:-

1. Detector system (fire alarm)
2. Fixed portable extinguishers
3. Automatic sprinklers
4. Construction of fire resistant buildings

5. Smoking controlled by notices, or by providing smoking rooms in the libraries.

These series of experiences had led the investigator to doubt the preparedness of Nigerian libraries to combat any major fire outbreak.

2.3.3 Flood (Water)

This may affect the materials through leakages of rain, faulty plumbing, faulty air conditioners or water used to quench fire.

In an article written by Adebayo (1987:9) in a Nigerian daily, he stated that destruction of media materials in libraries was experienced during a flood in Federal Ministry of Education; Victoria Island, Lagos. Most of the materials destroyed were teaching aids worth one million Naira. The materials were reported to be beyond salvage. The damage resulted from the leakage which stayed for days before it was noted.

One of the deteriorating stage is crumbling of papers, separation of emulsion layers in photographs, film coated papers sticking together. The above examples are worth studying in other Nigerian libraries.

2.3.4 Measures and Practices: Insurance

Insurance is a pre-disaster contingency measure of protecting the library building and the materials.

Singer (1946:3) in a survey, sees the importance of insurance as a method of either recovering cost of replacing damaged library materials. This she described as the "transfer of training." Melvin (1979:94) with memorabilia were displayed in glass cases in the library. The materials were not insured but they had plans to do so by putting alarm system to protect them. Before this was done, materials worth fifty thousand dollars were stolen. For

this reason, lack of insurance for libraries has been noted as a mistake.

2.3.5 Closed Access

This refers to the lack of free movement of circulating materials. With the media materials, it is necessary especially where replacement is difficult.

Cogswell (1982:133) examines the need for close access of media materials; i.e. to attain a proper Preservation and Security of materials because of its speciality. He further explained that some people feel that by advocating Security - checks and restricted areas, the library services will be altered. Whereas, these special collection are mostly visited by scholars, researchers and others who can pass the scrutiny of the staff.

In a related dimension, De Rose (1982:35) believes that the main problem of Security in libraries is dealing with disorderly patrons and circumstances usually change with time. Therefore, restrictions of usage or strict rules are upsetting to the scholarly society, yet such restrictions are unavoidable in a careless society and larcenous age.

Schnare (1982:150) similarly observed that restrictions are a nuisance, but loss of materials are worse. In his observation, people bridle when restrictions are imposed, feeling the impediment on one's work.

These observations and experiences, although serves a measure to effective Security and prolongation of life span of media material. One may want to know what is happening in Nigerian libraries with regard to open access and for close access approaches.

2.3.6 Surveillance

This is necessary in taking Security measure. Gandert (1982:177) in a survey highlighted two types of surveillance (what and how to observe) namely:-

a) Physical Surveillance, that is the actual observations of persons and activities by the human eye and recording the information.

b) Technical surveillance, that is the employment of technical equipment such as cameras, radios, electronic monitoring equipment for the purpose of preserving through observations made during the surveillance.

Hemphill (1982:181) in a similar development stated that libraries have a legal right to place surveillance on their employees. He opted for the technical surveillance which is mostly used in developed countries, through the use of close circuit television cameras with monitoring stations. Others install microphones with the cameras. This he said that sound is most helpful at night when the library is closed. Therefore, libraries were advised that the cost of such equipment should be monitored with their potential value and handling of the equipment should be by trained professional.

2.4 Summary of the Reviews

The foregoing chapter highlights the arguments and emphasis made by various writers on problem areas that have been investigated. It also points out the problem area that needs further investigation. Preservation, according to the writers has been inhibited through extreme climatic conditions. This poses problems to media materials in libraries located in tropical savannah. Precaution measures are therefore discussed with related problems to specific medium and its restoration.

Security of media materials in various conditions were discussed. These include how information technology has brought about changes in building designs as regard safety. Emphasis was laid on restoration and precaution through insurance, theft and Security systems.

References

Adebayo, Gbola (1987) "Rains destroy books at Education Ministry." National Concord, June 23rd.

Adekunle Jas (1987). "Call for law on fire safe cigarettes." Daily Times, October, 19.

Afolabi, Michael (1990) Factors influencing book theft and Mutilation among library users and staff in Nigerian libraries: a paper presented at the Nigerian Library Association Conference, Yola.

Alegbeley Bunmi (1990). "Contingency or disaster control planning in Nigeria with particular reference to University libraries." A paper presented at the 28th Annual Conference, 12th - 16th March, Yola.

Banks, Paul N. (1974) "Environmental standards for the storage of books and manuscripts", Library Journal 99 (Feb. 1).

Baker, Nicholas (1981). "Conservation and Preservation: A problem of library management." Libri 31 (3).

Barnes - Coge, A. O. (1989). Caring for books and documents. 2nd ed. - London: British Museum.

Bennett Jim (1987). "Trends in school library media facilities, furnishing and collections." Library Trends, 36 (3).

Buchberg Karl (1983). Paper: manuscripts documents, printed sheets, and works of arts. Connecticut: Greenwood.

Cogswell, J. C. (1982). Quoted in protecting your collection, by Slade Richard Gandert.

Cunha, George M. (1983). Conservation of library materials. Vols 2. - Metuchen: Scarecrow Press.

De-Rose Frank (1982). Interview quoted in protecting your collection by Slade Richard Gandert.

Dubin Fred (1987). "Mechanical systems and library," Library Trends 3 (2).

Fadola Oluyole (1990). "Preservation of non-print materials in Broadcast libraries in Nigeria." A paper presented at the Nigerian Library Association Conference, Yola.

Feather, John (1989) "Preservation and Conservation: a professional issue for the 1990's" New Zealand Libraries, 46 (2/3)

Goje Lawrence (1986). Security needs of public and school libraries. In proceedings of seminar on library Security organised by the Nigerian Library Association, Kaduna State Branch.

Gandert, Slade Richard (1982). Protecting your collection: a hand book, survey and guide for the security of rare books, manuscripts, archives, and works of art in Library and Archival Security, 4 (1/2).

Hammeen (1979) The Problems of Preservation of Library Materials in post primary institution in Benue State with particular reference to Gboko Division, B.L.S. Project, A.B.U. Zaria.

Hemphill, Charles K (1982) "Modern Security methods". Library and Archival Security. 4 (1/2).

Hemphills, C. F. J. (1987). "Trends in Academic Library Buildings." Library Trends 36 (3).

Holt, Raymond M. (1985). Buildings: American Library Association yearbook Chicago: American Library Association.

Horton, C. M. (1969). Conservation of library materials: cleaning and preserving buildings and related materials:- 2nd ed. Chicago: American Library Association.

Kodak, Eastman (1976) Film Handling:- New York: Rochester.

Mc Adams, Nancy R (1987) "Trends in Academic library facilities: library buildings," Library Trends, 36 (2).

McWilliams, Jerry (1977) "Storage, care and Preservation of sound recordings." Association of Record Sound Collection Journal, 9 (2-3).

Melvin, Herman (1979) "The Melville Herst." Library Journal. 104.

Ojo-Igbinoba, M. E. (1990) Conservation, Preservation and Restoration practices for printed materials for Nigerian Libraries: a paper presented at the Nigerian Library Association Conference, Yola.

Okata, C. E. (1990). Causes of deterioration of Library and Archival Materials in Nigeria. A paper presented at the Nigerian Library Association Conference, Yola.

Okoye-Ikonta, C. I (1980) Security problems in Nigerian University libraries. Unpublished M.L.S. Thesis, A.B.U., Zaria.

Omoniwa, Moses (1986) Library Security problems in Nigeria today: a keynote address in proceedings of the seminar on library Security organised by the Nigerian Library Association, Kaduna State Branch.

Parker, Thomas A. (1986) Study on Integrated Pest Management for Libraries and Archives - Paris: UNESCO.

Plumbe, W. L. (1966) The Preservation of books in Tropical and Sub-Tropical countries. London: O. U. P.

Salisu, Taofiq M. (1988) Preservation of Non-print resources: a pragmatic approach, a paper presented at the annual Workshop of Nigerian Library Association, Lagos Branch, Lagos.

Sargenent, Ralph (1974) Preserving the moving image - Washington D.C.: Corporation for Public Broadcasting.

Schanre, Robert (1982) quoted in Protecting your Collection by Slade R. Gandert.

Singer, Dorothy (1946) The Insurance for Librarians. Chicago: American Library Association.

Sloan, William (1979) "Projections, Film." Library Quarterly 12 (4).

Sundt, Christie L. (1982) "Mounting slides films between glass: for Preservation or destruction?". Visual Resources: An International Journal of Documentation 11 (23.

Swartzburg, Susan Gametson (1983) Conservation in the Library: a handbook of use and care on traditional and non-traditional materials. West Port; Greenwood Press.

White, Robert (1980) "Disc Storage Technology." Scientific American, 243 (2).

Whitter, J. G. L. (1979). "Teacher Counsellor held in Historical paper theft." New York Times, November 29.

Chapter 3

METHODOLOGY

3.1 Introduction

The purpose of this chapter is to present methods and procedures for carrying out the study. The following specific aspects are discussed; Research method, population of study, instrumentation used for gathering data, procedure for collecting data and procedure for analysing data.

3.2 Research Method Adopted

The investigator made use of survey and comparative research techniques. The survey method involves a study of libraries with media collections in Kaduna, Jos and Zaria in terms of Preservation and Security problems. The comparative research method compared the problems and methods of Preservation and Security of media materials in order to determine areas of similarities and differences. Busha and Harter (1980:2) stated that the comparative method is aimed at understanding similarities and differences.

3.3 Population of Study

The population of the study comprises of libraries with media collections in Kaduna, Zaria and Jos. In order to determine the availability of media collection in a library, the researcher travelled to the three cities to survey the libraries. These libraries consist of the following: Library Board of Kaduna State, Nigerian Television Authority, National Educational Technology Centre, National Teachers Institute all in Kaduna. Kashim Ibrahim Library ABU, National Research Institute for Chemical Technology, National Animal Production Research Institute all in Zaria and National Institute for Policy and Strategic Studies Library, University of Jos library both in Jos.

Sampl. g was not adopted in this study, because all the libraries w ia collections in Kaduna, Jos and Zaria were studied. In order words, the population of the study was studied.

The respondents in the study were the librarians of the libraries with media collection which constituted the population of the study.

3.4 Instrumentation

The three instruments adopted for the conduct of this study are questionnaire, interview and observation. Kerlinger (1973:16) observed that some investigations may use more than one instrument.

From alternative answers, the most applicable answer was to be chosen by the respondents. The same type of questionnaire was produced for all the libraries under study.

3.5 Procedure for Collecting Data

Questionnaires were validated by my supervisors before the were administered. This was done to avoid ambiguity t respondents and to the researchers satisfaction. They wer administered personally to the selected libraries on differe days. The collection was done on different days. Two letters introduction were attached to the questionnaires. The fir letter was from the Head of the investigator's Department and t second from the investigator. Information was cross-checked ascertain accuracy in completion of the questionnaires. Infor interviews, discussions and observations were made to repl deficiencies obtained in the questionnaires.

3.6 Procedure for Analysing Data

Questions Discussed

Questions discussed in the questionnaire were based on the stated research questions. They were divided into sections as follows:-

1 - 3 General question that introduces the institution

4 - 5 Media services rendered

6 - 24 Preservation problems and preventive measures. These include building, light and humidity, fungus, insects, dirt and dust, human causes

Security problems which are also part of Preservation problem include

25 - 33 Theft and building where these materials are housed, fire, water

34 - 35 Comparison of these threats on media materials under investigation

36 - 52 Measures taken for effective Preservation and Security practices in libraries as regard

1) Storages
2) Staff training
3) Maintenance and repairs of media materials
4) Insurance
5) Closed Access
6) Surveillance.

3.7 The descriptive statistical method was used to analyse the data collected for this study. Specifically, percentages and frequencies generated and tables were used to explain the trend of some phenomenon wherever necessary.

Preservation and Security of media materials in units of these libraries were studied. The analysed data was also

presented in tabular form and percentages to facilitate reading and understanding. The conclusions drawn were based on the findings obtained.

References

Busha, C. H. and Harter (1980) Research Methods in Librarianship: Techniques and interpretation New York: Academic Press.

Kerlinger, F. N. (1973). Foundations of Behavioural Research. New York: Holt.

Chapter 4

ANALYSIS, INTERPRETATION OF DATA AND FINDINGS

4.1 Introduction

This chapter presents and analyses data obtained from the study and the findings discussed. The questionnaires inquired about fifty three (53) questions on a wide ranging nature that reflects the objective of the study. Ten Libraries were involved and ten (or 100%) questionnaires were claimed from the respondents.

4.1.1 Staff Strength and general information

Among the information gathered is the staff strength. All libraries had librarians as library staff with the exception of NTI with had a media specialist. General information on seating capacity, population of users and total media holdings was responded fully by KIL. More than thirty five thousand (35,000) media materials were arrived at. Some 18,729 slides including tape/slide programmes, 6,454 microfilms, 5,053 microfiches, 2,211 gramophone records, 975 pictorial materials, 507 audio cassettes, 50 video cassettes.

4.2 Media Materials Available in Libraries Under Study

The media materials available in each library under study are indicated in Table 1. The various items (software) are assigned numbers 1-17, with an x mark denoting its availability in the libraries. Hardwares (17) are indicated in Table 2, using an x also for easy linkage with the libraries in which they also appear.

The research conducted include among others; the availability of media materials both software and hardware in libraries under study. Information of this nature has enabled the investigator to

identify the need for Preservation and Security implementation in the libraries.

Table 1 on page 34 shows that seventeen items (software) were surveyed and described from libraries investigated as follows:- KIL indicated fifteen (or 88.24%), NAPRI four (or 23.52%), NARICT and NTA six (or 35.29%), LBKS twelve (or 70.59%), NITR and NTI eight (or 47.05%), NETC fourteen (or 82.35%), UNIJOS eleven (or 64.70%) and NIPSS five (or 29.41%). These were based on the services needed in the organisations and the level of awareness.

TABLE 1: Software Available in Libraries Under Study.

SOFTWARE	LIBRARIES									
	KIL	NAPRI	NARICT	LBRS	NTA	NITR	NETC	NTI	UNIJOS	NIPSS
1. Pamphlets	X	X	X	X		X	X		X	X
2. Maps	X	X		X		X	X		X	X
3. Charts	X	X		X		X	X		X	X
4. Photographs	X		X	X	X	X	X		X	X
5. Art prints	X						X		X	
6. Slides	X			X		X	X	X	X	
7. Filmstrips	X		X	X			X	X	X	
8. Overhead transparencies	X		X	X			X	X	X	
9. Film catridge	X					X		X	X	
10. Video tapes	X		X	X		X		X	X	X
11. Photographic films	X					X		X	X	
12. Audio tapes	X			X		X		X	X	
13. Audio disc	X			X		X		X	X	
14. Microfilm	X			X		X		X		
15. Microfiche	X	X		X		X			X	
16. Computer software			X							
17. Video Disc	-	-	-	-	-	-	-	-	-	-
	15	4	6	12	6	8	11	8	12	5
	%	%	%	%	%	%	%	%	%	%
	88.24	23.52%	35.29	70.59	35.29	47.07	82.47	47.07	64.05	29.41

A Corresponding Information Concerning Hardware is Shown in Table 2 Below.

TABLE 2:

HARDWARE	LIBRARIES									
	NII	NAPRI	NARICT	LBKS	NTA	NITR	NETC	NTI	UNIJOS	NTPSS
Film strip viewers	X						X		X	
Microfilm equipment	X			X		X			X	
Microfiche equipment	X	X								
Photo-camera	X		X		X	X	X	X	X	
Video-camera	X		X	X	X	X	X	X	X	
Enlargers	X				X		X	X		
Open-reel-reel equip.	X					X	X			
Slide projectors	X			X		X	X	X	X	
Television	X	X	X	X	X	X	X	X	X	X
Players	X				X		X	X		
Audio tapes	X			X	X		X	X	X	
Film projectors	X			X	X	X	X		X	
Amplifier	X				X	X		X		
Flash guns	X							X	X	
Dark room alarm clock	X							X	X	
Satellite					X					X
Computer			X							
Total No. of items	15	3	4	6	9	8	10	11	10	3

The earlier comments on Table 2 shows some level of media equipment available. Out of the libraries investigated, seventeen equipment were investigated. KIL, being an academic library with an objective of aiding teaching, learning and research contained, fifteen (or 88.23%) of media equipment. Similarly, NTI, a closely related institution for training identified eleven (or 64.71%) media equipment. NETC as an Educational Media materials production unit and UNIJOS had ten (or 58.82%). NTA, an information and culture based organisation recorded nine (or 52.64%) media equipment. NITR, a special library in Kaduna responded with eight (or 47.06%). The only public library included in the study, LBKS showed the availability of six (or 35.29%) of media equipment for rendering information services. NARICT being a newly established institution (Media Unit) with their specialised services responded to have four (or 23.53%). Although it is the only organisation under survey with computer services. NAPRI and NIPSS had two (or 11.76%) media equipment available. NIPSS being a very popular institution, with specialised group of clients of highly placed Military personnel seem too have a meagre content of media equipment as two (or 11.76%). According to NAPRI most of the media equipment inadequacy is aided by extended services to KIL library. National Institute of Policy and Strategic Studies reported to have specialised unit whose needs are not really based on training but to inform.

4.3 Preservation Problems

4.3.1 Library Building

TABLE 3: Library Building

CLEANING DUTIES	NO. OF LIB.	%
DAILY	5	50
TWICE DAILY	-	-
WEEKLY	3	30
MONTHLY	1	10
NOT OBSERVED	1	10

Among the questions asked include, the number of times the media unit is cleaned. The table above shows some factors that affect media material Preservation and Security. Responses from libraries showed that five (or 50%) - NTA, LBKS, NETC, UNIJOS, NARICT clean their media unit daily, while three (or 30%) - KIL, NTI, NAPRI clean their library weekly. One (or 10%) - NITR clean monthly, and one library does not observe as well. One or 10% - *NIPSS* clean once a month. Ritzenthaler (1983:30) noted positive impetus to maintain good cleaning conditions. Therefore, others who clean occasionally, do it not to redistribute dust to the items, but to maintain conducive condition for the storage of materials and readers.

Specific staff are assigned to the cleaning of the unit. All the ten (100%) responded to have a staff not necessarily trained for the cleaning job. The possibility of library building deterioration and breakages while the library is on or closed is a matter of concern.

Carelessness can therefore, lead to building deterioration and inSecurity. For best result, building maintenance should be emphasised.

4.3.2 Light

TABLE 4: Damage by Light

EXPOSURES	NO. OF LIBS.	%
RISING SUN	-	-
SETTING SUN	-	-
BOTH RISING & SETTING SUN	1	10
NONE	9	90

Table 4 above asked of the possibility of the rising or setting sun in the media unit. Media materials deteriorate through this form of light which radiates energy. One (or 10%) (LBKS) library experienced the rising and setting sun. Nine (or 90%) - NTI, NITR, NTA, NBTE, NARICT, NAPRI, KIL, UNIJOS, NIPSS libraries responded to have no problem with sun light. This might be as a result of a well constructed building design. The most harmful is direct light shining on the media materials. This actually expands the medium. To protect them, ultra violet sunscreen is used to cover fluorescent bulbs and curtains or blinds on windows from sun.

4.3.3 Excessive Temperature and Humidity

TABLE 5: Cooling Systems Available in Libraries Under Study.

TYPE OF COOLING SYSTEMS	NO. OF LIBS.	%
CENTRAL AIR CONDITIONERS	2	20
UNIT AIR CONDITIONERS	7	70
NONE	1	10

It is noted that rapid changes in temperature affects media materials especially in the tropics. The libraries under study are situated in a tropical savannah zone and the Plateau area is

cooler in the months of December to January and during raining seasons. Therefore, air conditioners are required for effective Preservation of media materials in the tropics. It is noted in the table above that central air conditioners are obtained in two (or 20%) of the libraries namely, KIL and NTI. Unit air conditioners are common in seven libraries. They are heavily used in seven (or 70%) of libraries surveyed (NETC. NITR, NAPRI, NTA, NARICT, UNIJOS, NIPSS. The public library due to lack of funds had none. Media materials such as photographs get damaged when there is high humidity. In order to find out how moderate the temperature is, the nature and the use of air conditioners is observed.

4.3.4 Damage by Fungus

TABLE 6: Extent of Damage by Fungus

EXTENT OF DAMAGE	NO. OF LIBS.	%
PLENTY	-	-
LITTLE	2	20
NONE	8	80

Table 6 illustrates damages by fungus on media materials. These formats, unlike books have little or no experience of this menace. UNIJOS and NIPSS libraries responded to have noticed little due to some non use of some pamphlets for long. Fungus has not been experienced by eight (or 80% - LBKS, NTA, NITR, NTI, NETC, NAPRI, NARICT, KIL) libraries.

What do these libraries do to combat the problem? The measures include (a) destruction of medium, (b) isolation, (c) fumigation, (d) cleaning with brush and soft cloth. In the light of damage done by fungus, UNIJOS and NIPSS responded to cleaning with brush or soft cloth. This is found in this library in

particular because of the weather condition, and poor storage condition.

It is observed that the level of awareness practiced has reduced the extent of damage. NTA recognised the media specialist to be aware of the menace, while NETC senior staff have knowledge of the damage caused by fungus. An awareness is necessary, because fungus grows where there is no enough air or damp areas. It stains and weakens materials especially photographs and pamphlets. It also causes pitting on discs surfaces which affects playback quality.

4.3.5 Insects

TABLE 7: Damage by Insects

TYPE OF INSECTS	NO. OF LIBS.	%
COCKROACHES	4	40
TERMITES	-	-
MOTHS	-	-
SPIDER/SILVER FISH	1	10
NONE	5	50

Various insects damage of media materials have been discussed in chapter two. Nevertheless, it is important to know the recent happenings in libraries. The table above shows that cockroaches are the commonest insects found in four (or 40%) libraries under study (LBKS, NITR, UNIJOS, KIL). NARICT experienced spiders and silverfish. NTI, NTA, NIPSS, NAPRI and NETC showed no experience. Insect damage is observed to take place mostly in dark, damp, dirty and poorly ventilated areas. This shows an inappropriate Preservation condition in the media unit. The damage is created through holes and stains on mostly photographs and films. This damage has been observed to be irreparable or irreversible.

The question on the standing instruction given to staff as regard the presence of insects as investigated. NITR responded to reporting immediately the presence of insects for urgent attention, while UNIJOS kills without insecticides. Eight (or 80%) libraries use insecticide as a form of prevention (LBKS, NARICT, NAPRI, KIL, NTI, NTA, NIPSS, NETC).

4.3.6 Damage by Dirt and Dust

TABLE 8: Protect Against Dirt and Dust

PROTECTORS	NO. OF LIBS.	%
COVERED WITH POLYTHENER BAGS	3	30
ENCAPSULATION	-	-
BOXES	1	10
CABINETS	-	-
SHELVES	2	20
CUPBOARDS	-	-
ALL THE ABOVE	4	40
NONE	-	-

Damage to media materials by dirt and dust has been a common problem due to the weather conditions. Most especially in arid zones. Most of the libraries under investigation are situated in cities with industries around, especially in Kaduna. Therefore, Nitrogen and oxygen contains some quantities of pollutants that cause damage. Table 8 reports the care libraries give to protect and safeguard the materials from damage. Storage facilities is important as a result, three (or 30%) use special made bags to cover media materials (equipment) - NETC, NTI, KIL. NITR (10%) uses pamphlets, photographs and cuttings mostly, for that reasons

protects them by using boxes. NTA and NIPSS (20%) use mostly shelves, because of the frequent demands of films and pamphlets. The problem of dust is generally felt by all the libraries in Kaduna, Zaria and Jos respectively, especially during the harmattan season.

According to informal interviews with staff of the libraries studied and visited; this problem produces stains on photographs and scratches on magnetic tapes through solid particles. Staff and users are affected adversely also. In effect, the information on the medium is altered and attention is attracted. This is restored through cleanliness, while four (or 40%) libraries emphasis on packaging the machines (NAPRI, NARICT, LBKS, UNIJOS).

4.3.7 Human Causes

Instructions in handling media materials was among other questions asked. Responses include, storage according to medium; handling according to medium; all the above and lastly no instruction given.

TABLE 9: Damage through Handling.

TYPE OF PROBLEM	NO. OF LIBS.	%
PICTURE TEARING	1	10
SCRATCHES	4	40
DISCOLOURED MEDIA	-	-
OILY TOUCHES	-	-
LEANING PINS, CLIPS TO RUST	-	-
FAULTY EQUIPMENT	3	30
ALL THE ABOVE	2	20

Table 9, shows the human causes through handling. Picture tearing is experienced by NITR who use photographs and pamphlets

mostly. Four (or 40%) experienced scratches on film and NAPRI, NARICT, KIL and NIPSS experienced faulty equipment. Two (or 20%) of LBKS and NTA experienced all the problems mentioned. This was due to the demand and population of users. With the exception of NTI who have trained and experienced staff which makes the problem insignificant.

The question on awareness of handling was uniformly responded to as instruction attached to the machines or accompanying each medium. Lack of instructions keeps one in total ignorance.

4.4 Security Problems of Media Materials

4.4.1 Theft and Building

TABLE 10: Experience of Theft in Libraries

BURGLED LIBRARIES	NO. OF LIBS.	%
YES	4	40
NO	-	-
NONE	6	60

Media materials theft is not very common in libraries under investigation. Table 10 above shows that four (or 40%) libraries, namely, KIL, LBKS, NTA and UNIJOS have experienced theft of media materials. Again it is regarded insignificant in six (or 60%) libraries namely NAPRI, NATRICT, NETC, NTI, NITR and NIPSS. As a result of these responses the building structures are observed to be all concrete. Most libraries were situated in storey buildings (first floor), for Security. Every library is unique on its own nature on the basis of users, maturity and services rendered. According to discussions with the staff, the breakage into libraries is due to improper building structures and ineffective protectors.

4.4.2 **Entrances of a Thieves in Library Buildings**

TABLE 11: Entrances

ENTRANCES OF A THIEF	NO. OF LIBS.	%
DOOR	4	40
WINDOWS	-	-
WALLS	-	-

So many ways are observed for a thief's selfishness. However, the two University libraries, public library, NTA libraries that contain large readers population have more damage through theft. The libraries experienced some common technique used by thieves for illegal removal of media materials. This illegal entrance was found out to be through the door in most cases.

To support the facts on Table 10 and the discussions had with librarians, KIL had series of experiences of theft in the media unit. This actually dwindled the strength of equipment availability and services. Theft in the public library (LBKS) according to the media librarian has rendered the media service less effective. Most of the equipment there have been stolen and it was found out that video cassettes could be passed through the windows. The doors were observed not to be solidly made to protect theft. The NTI, though without wire netting, makes sure the key to the section and the store is kept by a particular senior staff. This according to discoveries makes it easy for a missing item to be accounted for. Not all readers are allowed the use of these items. This explained why theft is not common with the media materials in other libraries, such as NTI.

4.4.3 Anti Burglary Protection

TABLE 12: Anti Burglary Protection.

PROTECTION AGAINST THEFT	NO. OF LIBS.	%
Wire netting	3	30
Expanded metal rods	4	40
Locks that only staff can open with key	2	20
None	1	10

Following the discussions on Table 11, it can be stated that theft of media materials in libraries have not been noted as a very serious concern. Security in this aspect has been an integral part of the library's Preservation program. Table 12 shows the devices adopted by the ten libraries under study. Wire netting is used for protecting items from being stolen by UNIJOS, NIPSS and NARICT libraries. Four (or 40%) have expanded metal rods on windows (LBKS, NETC, KIL, NAPRI). NTA, NTI has a lock that only the library staff can open to control accessibility of items by users. NITR with less number of media materials, especially equipment had no additional protection device.

Judging the precautions, it is apparent, that there has to be a previous experiences before this devices are put in place. A well rather experienced staff can help in planning the library building to take care of the possible problems encountered.

4.4.4 Fire

The causes of fire in libraries are usually through smoking and electrical faults. In the light of this we shall know the experience of libraries under investigation. It is interesting to find out one among the possibilities of fire outbreak. One of the questions asked was directed at, whether smoking is allowed in any

of the libraries. All ten (or 100%) libraries under investigation banned smoking in their libraries, even to create a separate room for it. This shows the level of understanding of the harm fire can do to media materials. To rebuild the collection, a large sum of money is needed.

In the light of this discussion, a question was directed in finding out how long libraries keep electricians to work in the media unit.

4.4.5 Duty Periods for Electricians

TABLE 13: Duty Hours for Electricians.

DUTY HOURS	NO. OF LIBS.	%
NO ELECTRICIAN OF DUTY	1	10
WHENEVER THE LIB. IS OPEN	1	10
8 HRS. (7.30A.M - 3.30P.M)	3	30
7 1/2 HOURS	-	-
OCCASIONALLY	5	50

Table 13 shows that one (or 10%) has an electrician only when the library is open (LBKS). Three others (or 30%) keep electricians for 6 hours daily (7.30 - 3.30 p.m.) i.e. NETC, NTI, NARICT. Five (or 50%) of libraries under investigation keep electricians when there is need or occasionally; these are KIL, UNIJOS, NTI, NTA and NITR.

It has also been noted that fire protection devices such as handy fire extinguishers are found in all the libraries: except NAPRI that has carbondioxide in addition to the handy fire extinguisher. This shows that there is an awareness of the importance of fire fighting devices within the libraries.

4.4.6 Fire Extinguishers

TABLE 14: Staff Awareness.

CATEGORY OF STAFF AWARE	NO. OF LIBS.	%
ALL LIBRARY STAFF	7	70
ONLY SENIOR STAFF	1	10
ONLY JUNIOR STAFF	-	-
NONE	2	20

The table above has shown that there is a wide spread awareness of fire fighting basic technique by all category of staff in the libraries. Seven (or 70%) libraries (of NTA, NETC, KIL, NAPRI, NARICT, UNIJOS, NIPSS) responded to have taught all staff on how to handle the fire extinguishers, while one (or 10%) LBKS emphasised only on the senior staff. NTI and NITR are yet to identify the serious oversight of not teaching the staff as a precaution against fire outbreak. It was noted that no library responded to have incorporated the automatic sprinkler system and high expansion foam.

4.4.7 Damage by Flood

TABLE 15: Entrance of Water.

ENTRANCE OF WATER	NO. OF LIBS.	%
WINDOW	2	20
DOORS	-	-
ROOF	2	20
FAULTY TAPS	2	20
NO EXPERIENCE	4	40

Table 15 above shows that water gets into the media section through various ways. NETC and NTA (or 20%) experienced leakages through the windows, while LBKS and NITR (or 20%) experienced leakages through the roof. This might probably be as a result of the old age of the buildings. KIL and NARICT (or 20%) also

experienced leakages through faulty taps. The investigat understands, through discussions with NARICT staff that taps the toilets near the media room are faulty, that is why th experienced some spill of water, but never destroyed t materials. For that reason water flows unexpectedly to section. Four (or 40%) of the libraries (of NAPRI, NTI, UNIJ NIPSS) under study are yet to experience this threat. This cou probably be to the advantage of standard buildings housing these materials. It was noted that materials are not necessarily affected by these leakages because of the amount of flow ar quality of storage devices available.

4.5 Comparison of Preservation and Security Threats to Med Materials

Previous discussions were on media materials available the services rendered to libraries under study. Problems that ar likely to affect them were also discussed. In order to compa these threats, the table below shows at a glance, threats th affect libraries and their percentages.

TABLE 16: Prevalent Enemies of Preservation and Security Media Materials in Libraries Under Study

PROBLEMS	NO. OF LIBS.	%
LIGHT	1	10
EXCESSIVE TEMP./HUMIDITY	8	80
FUNGUS	2	20
INSECTS	5	50
AIR POLLUTANTS	3	30
HUMAN CAUSES	9	90
THEFT	5	50
FIRE	-	-
WATER	-	-

Table 16 shows the occurrence of Preservation and Security problems facing the libraries under study. One (or 10%) library was faced with the problem of direct sunlight. This affects the LBKS because of the position of the unit, therefore protective blinds are introduced to reduce the rays effect on the materials. Eight (or 80%) libraries, including the libraries in Kaduna and Zaria responded to having excessive temperature affecting their media materials during the hot seasons from March to May, except UNIJOS and NIPSS. In the cool season or rainy season, when dampness is expected, excessive humidity affects the materials and this brings about storage problem.

Temperature and humidity, most especially their rate of fluctuation causes a lot of damage to media materials. Harvey (1993:56) noted the control of the effect as vital preventive measure. This is because the menace also result to fungus attack. Two (or 20%) libraries namely, UNIJOS and NIPSS have experienced the effect. It has been noted that storage areas suffer most. Most materials left in store are not in frequent use and are therefore affected. The libraries at Zaria and Kaduna have the problem of insect disturbances. This is still with the influence of temperature except NTI, who had no problem of insect. This mostly affects graphic materials and pamphlets. Five (or 50%)of these libraries experienced the cockroach and silverfish most. It is controlled according to Bansa (1981:264, 267) through temperature and relative humidity. Building inspection and good housekeeping is recommended.

Dirt and dust affect three (or 30%) libraries, namely, LBKS, NAPRI and NITR. These are libraries that have more graphic and pamphlets in storage. These are controlled through cleaning and air conditioning. This problem, not withstanding is paramount in

the Northern states libraries because of the dry and harmattan seasons of the year. Other alternative besides the air conditioners are adopted, such as fans and good ventilation. Doors and windows are adjusted to seal tightly just as in NTI Media Unit. Regular cleaning is an essential preventive aspect rather.

Human causes is found by Nine (or 90%) libraries to be affecting the media materials Preservation and Security. This is because of misunderstood instructions on the packs of media equipment, and instruction produced by library management. Handling of the equipment and software has been an area of concern to most libraries. The damage is as a result of carelessness on staff and users of media materials. This is controlled through management policies, user education programmes and staff training. This is observed to be the commonest problem in all libraries under study.

Theft has been experienced mostly by KIL, UNIJOS, LBKS and NTA. These include four (or 40%) libraries who are noted for greater user population than other libraries under investigation. As a result of the prevalent problems in libraries, the gravity is illustrated in the table 17 below.

4.5.1 Rank Order of Gravity of Problems among Libraries

TABLE 17: Rank Order of Gravity of problems.

Libraries	Ranking from the commonest as A.B.C.D.E									No. of Problems
	1	2	3	4	5	6	7	8	9	
LBKS	C	D			E	B	A			5
NTA		B				C	A			3
NITR		C		A	D	E	B			5
NETC		C		B		A				3
NTI		A								1
KIL		C		B		C	A			4
NAPRI		C		B	D	A				4
NARICT		C		A		B				3
UNIJOS			C			A	B			3
NIPSS			A			B				2

KEY

1. Light
2. Temperature and Humidity
3. Fungus
4. Insects
5. Air pollutants
6. Human Causes
7. Theft
8. Fire
9. Water

Table 17 shows the gravity of problems experienced by each library investigated. The serial numbers in Arabic numerals above goes along with the numerals as the key (1 - 9) to the table. For instance, Number 1 stands for light in the key and also on the

table etc. The Alphabets are used as the gravity of problems commonly felt in each library accordingly. For instance "A" in each library stands for the commonest problems felt in library indicate with letter "A" Letter "B" as next commonest problem felt on each library up to letter E as the least problem felt.

The commonest problem in LBKS, NTA, and KIL is theft, which is signified with "A". According to the librarian in charge of the media unit in LBKS, this problem has diminished effective services in the section. The equipment to work with are not available and replacement has been difficult too. In the media co-operation (NTA) usage of the media materials is in high rate. According to the staff in charge, the transfer of staff has helped in the control of theft. KIL's experiences of theft has been through the door. Most theft affected television, video camera and cassettes. It has been controlled through staff supervision, surveillance on category of users and tighter Security.

LBKS had theft as the commonest, dust and dirt as the lowest threat. It also had five threats as the highest.

NTA experienced theft, as highest and human causes as least threat with three threats. NITR suffered most with insects as commonest threat especially on photographs, and human causes as the least threat resulting to five threats. NETC being in Kaduna too and as a production unit had human causes as the commonest threat. While temperature and humidity as the least threat making three problems. NTI, according to the discussions with the media technologist, hardly have problems with the Preservation and Security of media materials. Therefore, where there is power interruption or failure, lack of conducive temperature affects the unit. Although there is always a stand-by generating plant to aid any deficiency.

KIL, being a university library, experienced theft as earlier discussed in the first paragraph as the commonest threat, and lastly temperature and humidity. NAPRI an annex of Ahmadu Bello University experienced human causes, as the commonest and the least threat as temperature and humidity. NARICT experienced its commonest problem as insects and lastly temperature and humidity.

UNIJOS experienced theft as its commonest threat and fungus as the least threat. This is as a result of cool weather condition especially in the rainy season when it is heavier. For that reason they experienced three threats. Compared with KIL media materials are more available there than in UNIJOS, therefore usage is more evident. NIPSS had less media materials and therefore experienced two threats, fungus and human causes. Maturity of the users have influenced the Preservation and Security precautions. See figures I and II for more illustrations.

4.5.2 **Ranking of Highest to Lowest Problems**

TABLE 18: Ranking of Problems.

Ranking	Frequency of Libraries	Percentage of Frequencies
Human causes	9	90%
Heat and Humidity	8	80%
Insects	5	50%
Theft	5	50%
Air Pollutants	3	30%
Fungus	2	20%
Light	1	10%
Fire	-	-
Water	-	-

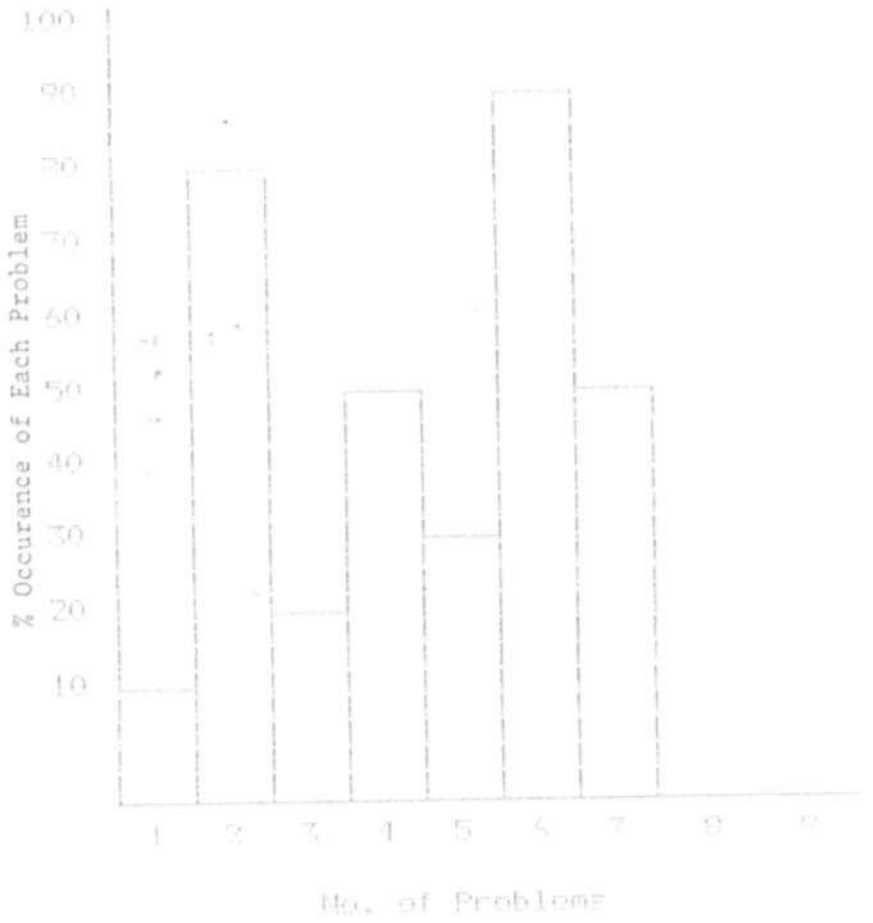
According to observations in these libraries, media materials - mostly affected are photographs, audio/video cassettes and equipment.

Table 18 shows the ranking of problems from the commonest as highest experienced to the lowest. Human causes as the highest was experienced in nine (or 90%) libraries under investigation except National Teachers Institute left out of this problem. Next was eight (or 80%) libraries of Library Board of Kaduna State, Nigerian Television Authority, Nigerian Institute of Tryponosomiasis Research, National Teachers Institute, National Educational Technology Centre, Kashim Ibrahim Library, National Animal Production Institute and National Research Institute of Chemical Technology - who experiences Heat and Humidity.

Insects were experienced in five (or 50%) libraries of Nigerian Institute of Tryponosomiasis Research, Nigerian Television Authority, University of Jos, Kashim Ibrahim Library and National Educational Technology Centre.

Theft was also experienced in five (or 50%) of libraries of Kashim Ibrahim Library, Library Board of Kaduna State, University of Jos, Nigerian Television Authority and National Educational Technology Centre. Dirts and Dust was experienced in three (or 30%) libraries of Kashim Ibrahim Library, National Animal Research Institute of Chemical Technology. Fungus was experienced in two (or 20%) libraries of University of Jos, Nigerian Institute for Policy and Strategic Studies. Light (ultraviolet) was experienced in one (or 10%) library of Library Board of Kaduna State. Fire and water were not experienced in libraries investigated.

FIGURE 1: Histogram of Percentage Occurrence of each Problem (see table 17).



Key

1. - Light
2. - Heat and Humidity
3. - Fungus
4. - Insects
5. - Dirt and Dust
6. - Human Causes
7. - Theft
8. - Fire
9. - Water.

The problems indicated in Figure 1, shows the magnitude of each problem which is further described on table 18. For instance number one on the histogram denotes the problem of light and only one library (or 10%) experienced it (Library Board of Kaduna State). The key shows the problems and the serial number to differentiate each.

FIG. 2: Bar chart showing the magnitude of problems affecting media materials Preservation and Security in libraries under study. (See table 17).

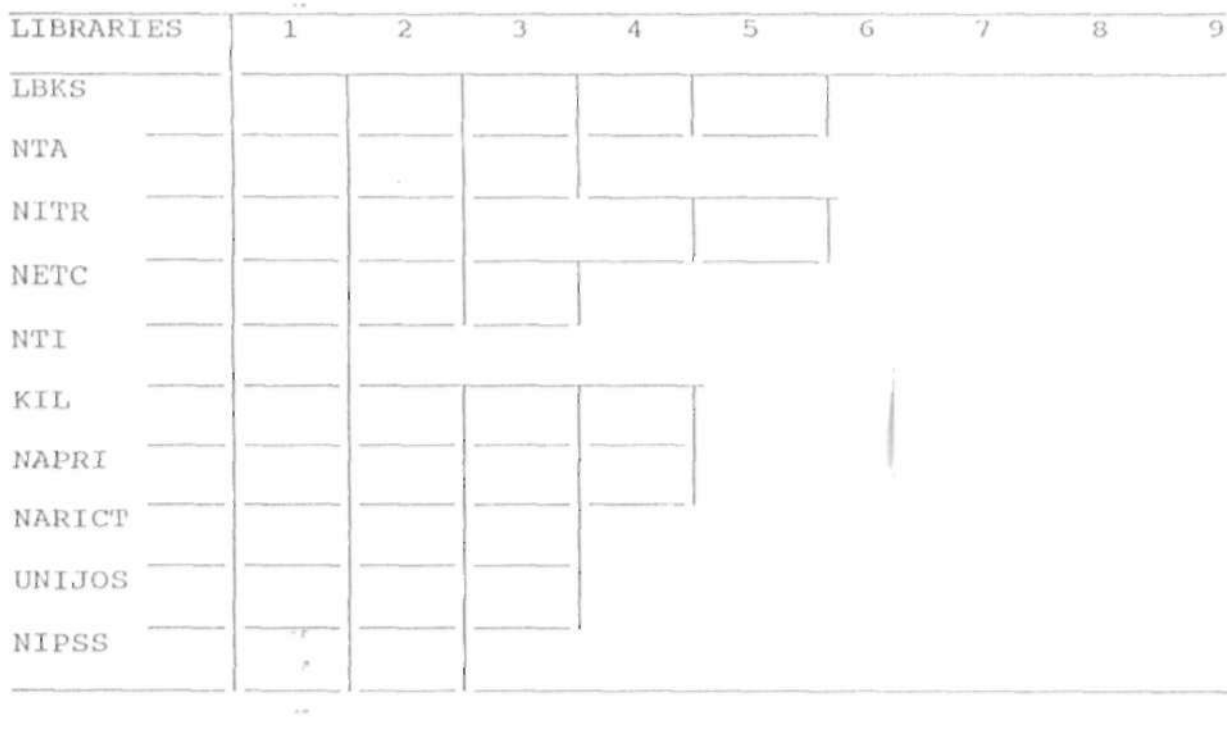


Figure 2 is linked with table 17. It shows (Fig. 2) the number of problems irrespective of type each library experienced. These problems include: Human causes, heat and humidity, insects, dirt and dust, fungus, light, theft, fire and water totalling nine problems. Each library experienced a number of problems according to the figure (2) above. For instance, LBKS experienced five problems in totality, including theft, Human causes, dust and dirt, light, excessive heat and humidity. Nigerian Television

Authority experienced three problems including heat and humidity, theft, and human causes. Nigerian Institute for Tryponosomiasis Research experienced five problems including heat and humidity, human causes, insects, theft and dirt. National Educational Technology Centre experienced three problems including heat and humidity, human causes, and insects. National Teachers Institute experienced one problem as excessive temperature and humidity. Kashim Ibrahim Library experienced four problems including theft, heat and humidity, human causes, and insects. National Animal Production Research Institute experienced four problems as insects, heat and humidity, human causes and theft. National Research Institute for Chemical Technology experienced three problems including heat and humidity, human causes and insects. University of Jos experienced three problems as well, including theft, human causes and fungus. Lastly, the Nigerian Institute for Policy and Strategic Studies experienced two problems including fungus and human causes.

The libraries under investigation were also required to provide statistical details of media materials lost in the previous year of study, due to Preservation and Security problems. The results were provided by only KIL (or 10%). This has been a serious problem found in this research. The researcher observed that libraries found it difficult to keep statistics of media materials deterioration. Records of such are difficult to retrieve by these libraries in Figure 2. NTI responded to find some difficulty in compiling the result. This is because media materials such as photographs are placed in an album, sometimes they are given out to important dignitaries on merit for their performances. Surplus of slides are available and unused ones are uncountable, therefore dictating such statistics is hard. Others

neglected the question unanswered due to similar problems. In general terms, most libraries found it difficult to keep media materials statistics of software especially. KIL responded to have lost twenty and above media software due to theft. Hardware lost were between three to four range. This was an encouraging aspect by KIL of what librarians are in the business to do.

4.6 Preservation and Security Methods Practised and Long Term Measures for improvement in Libraries Under Study

4.6.1 Storage

TABLE 19: Storage Facilities

STORAGE FACILITIES	NO. OF LIBS.	%
Shelves	-	-
Boxes	2	20
Cabinets	-	-
Cupboards	-	-
All the above	8	80
None	-	-

Table 19 shows the storage facilities available for effective Preservation and Security of media materials. All equipment must be appropriately kept for its task. It has been realised through observation in the public library that inadequate or improper storage of media equipment cause mechanical damage. Shelving in most of the libraries should be non-combustable. Two (or 20%) libraries, namely; NITR and NIPSS attach less importance to various media storage facilities except boxes. Eight (or 80%) libraries provide mostly all the necessary storage areas for protection and safety of the media materials (LBKS, NTA, NAPRI, KIL, NETC, NTI, NARICT, UNIJOS).

In addition to storage facilities, a question was directed on whether there is a separate store room to keep media materials not in immediate use. Three libraries (or 30%) had no separate store, due to the forms of media materials that needed storage facilities. These libraries include NITR, NAPRI and NIPSS. Other seven (or 70%) (LBKS, NTA, NETC, NTI, KIL, NARICT, UNIJOS) libraries had separate store. Under close observation, NTI keep unused and outdated equipment in the store. In relation to that a question was directed on how often they do organise checks for their health and safety. Seven libraries responded to check occasionally. Most stores were observed to be kept dusty and hardly do they go on daily cleaning.

4.6.2 Staff Training on Preservation and Security of Media Materials

TABLE 20: Staff Training

FORM OF TRAINING	NO. OF LIBS.	%
FORMAL EDUCATION	1	10
INFORMAL	2	20
ALL THE ABOVE	5	50
NONE OF THE ABOVE	2	20

An essential element of an effective user education programme is the example set by the library or media unit staff. All staff, no matter where they work, must observe the Preservation and Security principles. Practicing careful handling of media materials should be emphasised.

Table 20 above shows the form of Preservation and Security training given to the staff on media materials. NTI had formal training for its staff. Two (or 20%) libraries, namely, NTA and NARICT emphasised on informal training, while five (or 50%) libraries of UNIJOS, KIL, NIPSS, NETC and LBKS emphasised on both

formal and informal training. Two (or 20%) libraries give no training to their staff because of staff inadequacy (NITR, NAPRI).

Darling and Webster (1987:IX - A1) described user education on care and proper handling as thus: "We live in a time and place where shared resources are rare... The idea that a borrowed or used medium is the property of many and the right to consult it a privilege does not come naturally to the modern library client." Despite the difficulties, the potential benefits are well worth the effort. Ten (or 100%) libraries responded to showing how to handle equipment, orientation to new comers and cleaning media materials.

The libraries were asked if they had plans for staff training on media materials. NTA and NARICT responded to have informal training, and other libraries responded to have a laid down plan.

4.6.3 Maintenance and Repairs of Media Equipment

TABLE 21: Maintenance and Repairs of Media Equipment

RESPONSE	NO. OF LIBS.	%
YES	6	60
NO	4	40

Maintenance and repairs of media materials is a form of Preservation experienced by libraries under study. Six (or 60%) libraries shown in Table 21 above maintain and repair their media equipment. These include KIL, UNIJOS, NTA, NTI, NETC and NIPSS. Four (or 40%) libraries of NAPRI, NARICT, LBKS and NITR responded to have not been maintaining and repairing media materials. Following the explanation above, the six libraries showed an occasional method of maintenance and repairs. In an effort to determine whether equipment breakdown is experienced, ten (or 10%)

libraries responded 'Yes'. Six libraries discussed above took measures by repairing the machines using external technicians. Except NTI that had a technician in the unit, the other four (or 40%) leave it unrepaired because they don't have a competent technician for the job.

4.6.4 *Insurance Coverage in Libraries Under Study*

TABLE 22: Measures: Insurance Coverage

INSURANCE COVERAGE	NO. OF LIBS.	%
Insured jointly with institution	6	60
Insured separately	1	10
Not insured	3	30

The nature of media materials makes their insurance important for Security sake. Table 22 above illustrates insurance coverage practised by the libraries under study. Six (or 60%) libraries namely, LBKS, NITR, NTI, NARICT, NIPSS and UNIJOS insured jointly with the parent institution, while NAPRI insured separately. Three (or 30%) libraries did not insure their media materials at all. These include; KIL, NETC and NTA. I understand through discussions that this could be attributed to carelessness on the part of staff to confirm the insurance of these materials preserved and protected.

4.6.5 Closed Access

TABLE 23: Restrictions on the Use of Media Materials

RESTRICTIONS	NO. OF LIBS.	%
None	1	10
Only to senior staff and researchers	9	90
Only senior staff on training	-	-
Only students	-	-

Media materials are utilized by scholars, researchers and other interested persons. Table 23 above shows the users of the media collection. Only NIPSS doesn't operate close access but nine (or 90%) libraries allow only senior staff and researchers to use the media materials within the unit. Frank De Rose (1982:132) believes that the major Security problem in libraries is dealing with disorderly patrons, this is described among the questions in the questionnaire on whether media materials are given on loan. All libraries responded 'No'. This is attributed to the expensive nature of Preservation and Security of programmes used. An audio cassette may contain an information with many topics. Accessibility to other clients might be impossible or cause delay, for that reason quick deterioration is paramount.

4.6.6 Surveillance in Libraries

TABLE 24: Surveillance at Library Exit

CATEGORY OF STAFF WHO GUARD THE EXIT	NO. OF LIBS.	%
Attendants	6	60
Assistants	1	10
Security men	3	30

Table 24 shows who observes the protection and safety of media materials at the exit of the media unit. Six (or 60%) libraries use library attendant at the exit while one (or 10%) library (NAPRI) use library assistant. Three (or 30%) libraries, namely, NTI, NTA and LBKS use Security men to guard the exit. This form of surveillance is called physical surveillance. Technical surveillance is the employment of equipment for the purpose of observation. These equipment include cameras, radios, and electronic monitoring. All libraries practice the physical surveillance. None use electronic surveillance system because of cost. Actually not all libraries can afford it.

REFERENCES

Bansa Helmunt (1981). "The Conservation of Library Materials in Tropical and Sub-Tropical Conditions," IFLA Journal 7,(3).

Darling, W and Websterd, D. E. (1987). Preservation Planning Programme: An Assisted Self-Study Manual for Librarians: Washington D.C., Association of Research Libraries.

Harvey, Rose (1993) Preservation in Libraries: a reader. London: Bowker.

Ritzendaler, M. C. (1983) Conservation: A Manual on Physical Care and Management.- Chicago, Society of American Archivists.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter summarises the entire research work and draws conclusions based on the findings. The investigator outlines recommendations based on observations, interviews and the findings. This ensures effective Preservation and Security of media materials in the present and future libraries. Further researches could also be established through a survey of the work.

5.2 Summary of Findings

The aim of this study was to identify existing media materials preserved and secured for use for posterity. It was also to identify the problems encountered by libraries in the process of practicing Preservation and Security of the materials and how these methods can help to minimise the problems.

In view of the above, seven research questions were formulated. Three methods were used to collect information. A questionnaire was structured, validated by my supervisors and sent to ten libraries in Kaduna, Zaria, and Jos. This was followed by visits to confirm the information obtained and personal observations. Descriptive statistics to generate percentages and frequencies were used along with illustrations and tables.

It was found out that no library was efficient in media material services. Therefore, acquisition was minimal to enable Preservation and Security to take its position for its life span and safety. KIL had the highest number of software and hardware, followed by NTI. NAPRI and NIPSS had the least in terms of quantity.

Problems encountered among libraries were environmental in nature. These include excessive temperature and humidity, ultra

violet light, fungus, pest and insects, human cause, just to mention a few. Human causes which include inappropriate handling of media materials was highly found in nine libraries, followed by excessive temperature and humidity. LBKS and NITR recorded the highest problems, while NTI had the least number of problems. Graphic materials were mostly affected, while fire and water were least or not experienced by libraries under study. (See table 16-18). Measures were taken to combat the problems through staff and user awareness of the harm these factors can cause.

Preservation and Security practices varied among the libraries. These includes housekeeping, storage, maintenance and repairs, staff training, closed access, surveillance at exit and insurance of libraries. Daily library activities of cleaning procedures had been a form of Preservation. Storage of media materials had not been given adequate attention, and therefore it aids in mechanical damage. Most stores and display areas were observed to be dusty and checking or supervision was hardly done. It was observed that all libraries experienced breakdown of hardwares. Six libraries practiced maintenance and repairs, while others don't, due to lack of fund and attitude towards life span and its safety. It was only NTI that had a technician within the library. Staff formal training was experienced in NTI and they also train staff from other institutions on media services. Other libraries intend to embark on formal and informal training of their staff.

Close accessibility has been practised by all libraries to minimise theft and for easy accessibility to users in the library. Loans were not practised and therefore physical surveillance should be emphasised at the exit. All libraries had one door as entrance and exit. Only library attendants and assistants check

illegal removal of materials, except NTI, NTA and LBKS who use Security men. Insurance coverage was neglected in three libraries, while others insured jointly with the institutions.

5.3 Conclusion

The analysis of data yielded some conclusions to the findings for the purpose of making informed decisions. It can be concluded that:

1. Buildings play a significant role in preserving Media Materials in libraries. Buildings not constructed properly cause deterioration of Materials faster. The new technology for example makes a creation of an impact on the buildings in terms of power distribution. Libraries in this case are growing organisms and their collection range far beyond books (Holt 1985:76).
2. Lights deteriorate Media Materials such as films, pictures and charts through fading and chemical changes. Some pictures in some libraries were seen bleached because of this effect. This affected paper type materials most (Cunha 1983:133).
3. Hot temperature was mostly experienced in the libraries under study, based on the area they are located. This threat was in a large extent responsible for Media Material deterioration. This was confirmed in some libraries (NTI), that Media Materials (Slides) exposed to high humidity, causes dampness and sticking together. This was also observed in other studies that nitrate films in its severe deteriorating stage is liable to spontaneous combustion at very hot temperature (Sloan 1979:32).
4. It is also concluded that Cunha (1983:150) described insects as a tropical phenomenon because of warm climate which

enhances their breed. This threat was experienced in most libraries and good home keeping retards their growth. Their destruction sometimes is irreparable. For example making holes on photographs is disastrous.

5. Dirt and dust have serious deteriorating effect on media materials in windy areas. This is concluded to have an effect on most non-print than the print materials. For tapes and disc, damage can be caused by dropout which agrees with MC William (1977:10) survey.

6. Human causes is attributed to poor handling, staff/users attitude and poor maintenance on the part of the staff. This was confirmed with Omoniwa (1986:5) on lack of commitment of staff to their duties and non functional facilities. LBKS was observed to have many non-functional facilities kept without use. Keeping or storage of these materials not in the proper manner deteriorates their life span. It was also observed that increased usage of media material reduces their life span.

7. It can also be concluded that theft of media materials in libraries has been one of the oldest threat experienced. This according to authors could be due to poor services, social and economic factors. Methods used in executing theft in libraries under study were mostly through broken doors. Unlike printed materials described by Afolabi (1990:5) which were thrown out through windows. Buildings not designed with Security in mind lacked the quality for public utilities.

8. Fire has remained an ancient scourge in libraries, but libraries under study had never experienced fire as a threat. Most libraries are conscious of the precaution and have taken necessary steps.

9. Water is another threat of media material that has never affected the materials. This was experienced sometimes in Federal Ministry of Education, Lagos, where they lost many library materials. All materials stayed in the flood over the weekend and were beyond salvage.
10. It can also be concluded that pre-disaster contingency measures can be taken to protect and secure media materials from severe deterioration, through insuring the building and materials. Most libraries under study insured jointly with institutions.
11. Restrictions on media materials were unavoidable because of their uniqueness and delicacy. This served as a measure to effective Preservation and Security. Physical surveillance was mostly practiced than the technical type, because of lack of necessary gadgets for technical surveillance. This was mostly done by Library Assistants in the libraries investigated, except NTI who had Security men at the exit.

5.4 Recommendations

In view of the findings highlighted in the conclusion on the Preservation and Security problems facing the libraries, and the apparent lack of adequate measures to tackle these problems, the following recommendations are made for the improvement of Preservation and Security of Media Materials in the present libraries and future planning.

1. All libraries housing media materials should have window blinds on their windows to protect from sunlight. Fluorescent lights to be covered or coated with ultraviolet filters to reduce the speedy deterioration of media materials. The direction of the sunlight should be considered also in the building construction.

2. Extreme heat and humidity was to a large extent responsible for media materials deterioration. If they are subjected to excessive heat they loose their finite component (cassettes, films and sliders). All rooms that house media materials should therefore maintain controlled temperature by using air conditions for conducive atmosphere and longer life span. Materials like Magnetic tapes should be copied once every six to ten years to avoid loss. Libraries who can afford Thermometers and Hygrometers will help in measuring the temperature and humidity. These instruments help in controlling extreme climatic condition.
3. Hot and humid conditions can also stimulate the growth of fungus on media materials. For that reason all materials should be stored at controlled temperature and humidity. Areas already affected are brushed off with the use of chemical fungicides.
4. Because of the warm climate, insects were experienced as enemies to media material collection. Therefore, it is recommended that fumigation be required through spraying of insecticides, avoidance of spill foods, dark and damp areas.
5. During the dry and harmattan seasons, dust and dirt use to affect the media materials Preservation and Security most. Therefore, scrupulous housekeeping is to be reinforced. On films, spray cleaners are used. Packaging is an important remedy to prevent dust on machines.
6. Inadequate qualified staff usually encourage the mishandling of media materials. It is recommended that the teaching of Preservation and Security of Media Materials be incorporated as a compulsory course in our Library Schools curriculum. In-house workshops for library staff of various categories

and students orientation to be reinforced. These will reduce the carefree staff/users attitude and a maintenance culture will be developed. Instructions should be obeyed and carried out to enable their life span and safety. Materials on high use could be encapsulated.

7. The safety of media materials in libraries is for equal opportunity of present and future use. Suitable building structure must be one of the factors of effective Security for precaution against theft, fire and flood. All the plumbers, electricians, carpenters, librarians and the architects should be involved in planning for the building to house the media materials. Security actually mist be given priority.

8. Insurance of media materials, and the building is recommended for all libraries which helps in recovery of items lost.

9. Circulation of media materials is controlled because when lost, replacement is difficult. Restrictions are unavoidable in a careless society, in addition to the measure recommended, physical surveillance is necessary. That is why library staff have to be alert at any angle they find themselves and in rendering services. The cost of technical surveillance equipment such as the close circuit television should be monitored with their potential value and handling before embarking on them. Only systems suitable to our peculiar situations could be selected.

5.4.1 Suggestions for Further Research

This investigation has established, that human causes, excessive temperature and humidity, theft, are the greatest and toughest Preservation and Security threats facing libraries. However, the investigator wishes to suggest further studies in the following areas:

1. The causes of theft and loss of media materials.
2. It is also necessary to undertake a study that will ascertain the opinions of Librarians on the difficulty in giving adequate statistics of records of media software in libraries which was a problem established among libraries.
3. Researches should be conducted into Library Architecture to reduce Security threats to library resources.

REFERENCES

Afolabi, Michael (1990) Factors influencing book theft and mutilation among library users and staff in Nigerian libraries: a paper presented at the Nigerian Library Association Conference, Yola.

Cunha, George M. (1983) Conservation of Library materials.- Vols. 2. - Metuchen: Scarecrow Press.

Holt, Raymond M. (1985) Buildings: American Library Association yearbook.- Chicago: American Library Association.

Mc Williams, Jerry (1977) "Storage, care and Preservation of sound recordings", Association of Recorded Sound Collection Journal, 9 (2-3).

Sloan, William (1979) "Projections'" Film, Library Quarterly, 12 (4).

B I B L I O G R A P H Y

Adebayo, Gbela (1987) " Rains destroy Books at Education Ministry". National Concord, June 23rd, p. 9.

Adekunle, Jas (1987) " Call for law on fire safe cigarettes" in Daily Times, Oct. 19th p. 2.

Afolabi, Michael (1990) " Factors influencing book theft and mutilation among Library users and Staff in Nigerian Libraries." A paper presented at the 28th NLA Conference Yola.

Alegbelege, Bunmi: (1990) " Contingency or Disaster Control Planning in Nigeria with particular reference to university Library." A paper presented at the 28th Annual NLA Conference, 12th - 16th March, Yola.

Alegbeleye, G.O (1990) " Conservation and Preservation of Library, Archival and Museum materials: a keynote Address" at the Nigerian Library Association Conference, Yola.

Baker, Nicholas (1981) " Conservation and Preservation: a Problem of Library Management" Libri. 31(3) 193.

Banks, Paul .N. (1978) " Preservation of Library Material" in Encyclopedia of Library and Information Science, - Vol. 23. - New York: Dekker, p. 180.

Bansa, Helmeit (1981) " The Conservation of Library Materials in Tropical and Sub-tropical Conditions" IFLA Journal 7(3): 264.

Barnes - Cope, A.O. (1989) Caring for Books and Documents. - 2nd ed. - London: British Museum, p. 9.

Bennett, Jim (1987) " Trends in school library media facilities, furnishing and collections." Library Trends, 36 (3).

Buchberg, Karl (1983). Paper: Manuscripts, Documents, Printed Sheets, and Works of Arts. - Connecticut Greenwood, p. 35.

Busha, C and Harter, S (1990) Research Methods in Librarianship. - New York: Academic Press, 2.

Byrnes, Margaret (1992) "Preservation and Collection Management: Some common concern in the collection building reader.- New York Neat Schuman.

Cogswell, J.C. (1982) Quoted in protecting your collection by Slade Richard Gandert p. 29.

Cunha, George M. (1985) Conservation of Library Materials. - 2 vols. - Metuchem sacrecrow press, p. 33.

Darling, P.W and Webster, D.E (1987) Preservation Planning Programme: And assisted self-study manual for Libraries.- Washington D.C., Assoc. of Research Libraries, p. 9.

De - Rosa, Frank (1982) in Protecting your collection by Slade Richard Gandert p. 135.

Dubin, Fred (1987) " Mechanical Systems and Library" Library Trends, 3(2) 351.

Ely, D.P. (1968) " The Changing Role of the Audio Visual process in Education: a definition and glossary of guide to Audio Visual terminology," The EPIE Forum, 1 (6).

Fadola, Oluyole (1990) "Preservation of Non-print Materials in Broadcast Libraries in Nigeria", A paper presented at the NLA Conference, Yola.

Feather, John (1989) "Preservation and Conservation: A Professional Issue for the 1990s" New Zealand Libraries 46 (2/3)

Gandert, S. Richard (1982) " Protecting your Collection; a Hand-book, survey and guide for the Security of Rare Books manuscripts, Archives, and works of Art." Library and Archival Security, 4(1/2):7.

Goje, Lawrence (1986) " Security needs of Public and School Libraries" In proceeding of seminar on Library Security organised by the Nigerian Library Association, Kaduna State Division.

Hameen, E.N. (1978) " The problems of Preservation of Library materials in post primary institution in Benue State, with particular reference to Gboko Division," B.L.S project, A.B.U, Zaria.

Harvey, Hemphills C.F (1982) "Modern Security Methods", Library and Archival Security, 4 (1/2).

Harvey, Ross (1993) Preservation in Libraries: Principles, Strategies and Practices for Librarians.- London: Bowker.

Hephills, C.F. (1987) " Trends in Academic Library Buildings", Library Trends. 36(3) 292.

Holt, Raymond M., (1985) Buildings: ALA Yearbook - Chicago: ALA, P. 76.

Horton, C.M. (1969) Conservation of Library materials: Cleaning and Preserving Buildings and Related Materials - 2nd ed.- Chicago. ALA, p. 7.

Kerlinger, Fred N. (1973) Foundations of behavioural research. - 2nd ed. - New York: Holt Rinchart and Winston, p. 459.

Kodak, Eastman (1976) Film Handling.- New York: Rochester New.

MC Adams, Nancy R. (1987) Trends in Academic Library Facilities: Library Buildings, Library Trends, 36 (2).

McWilliams, Henry (1977) " Storage, Care and Preservation of Sound Recordings," Association of Recorded sound collection Journal, 9(2-3) 3-10.

Kiekeguard, Soren (1983) in Richard Gandert.

Melvin, Heyman (1979) " The Melviue Heist," Library Journal, 104 (994).

Ojo - Igbinoba (1990) "Conservation, Preservation and Restoration Practices for Printed Materials for Nigerian Libraries." A paper presented at the 28th NLA Conference, Yola.

Okata, C. E. (1990) " Cavseb of the Deterioration of Library and Archival materials in Nigeria". A paper presented at NLA Conference, Yola.

Okoye - Ikenta G. I. (1980) " Security Problems in Nigerian University Libraries." Unpublished M.L.S. Thesis, A.B.U., Zaria.

Omoniwa, Moses (1986) Library "Security Problems in Nigeria Today: a Keynote address." In proceedings of the seminar on Library Security organised by the Nigerian Library Association Kaduna State Divisíon, p. 15.

Parker, Thomas A. (1986) A Study on Integrated Pest Management for Libraries and Archives. Paris: Unesco, p. 23.

Plumbe, W.L. (1966) The Preservation of Books in Tropical and sub-tropical countries - London: OUP. P - 1.

Ritzenhaler, M.l. (1983) Conservation: a Manual on Physical Care and Management. - Chicago; Society of American Archivist, p. 30.

Salisu, Taofiq M. (1988) " Preservation of Non-print Resources: a Pragmatic approach." A paper presented at the annual workshop of NLA Conference, Lagos Division. Lagos. p. 5.

Sargent, Ralph 91974) Preserving the Moving Image. Washington D.C. Corporation for Public Broadcasting. p. 135.

Schnare Robert (1982) Quoted in Protecting your Collections by Slade. R. Gandert p. 138.

Singer, Dorotpy (1946) The Insurance for Librarians - Chicago: ALA p. 3.

Sloan, William (1979) " Projections Film". Library Quarterly, 12 (4) 1.

Smith, Memly et al. (1984) "Pressure - Sensitive Tape and Techniques for its Removal from Paper" Journal of American Institution for Conservation, p. 101.

Sundt, Christine L. (1982) "Mounting Slides Films between glass: for Preservation or destruction?" Visual Resources: an International journal of Documentation II (23) 337.

Swartzburg, Susan Gametson (1983). Library: a handbook of use and care of traditional and non traditional materials.- Westpart: Greenwood Press p. 5.

White, Robert (1980) "Disc Storage Technology". Scientific American 243 (2): 138.

Whitter, J.G.L. (1979) " Teacher Counsellor held in Historical papers theft." New York Times, November 29 p. 22.

APPENDIX 1

PRESERVATION AND SECURITY OF MEDIA MATERIALS
IN SELECTED LIBRARIES IN KADUNA
Q U E S T I O N N A I R E

The following questions are intended to reflect media materials Preservation and Security, their deteriorating factors and measures taken to ensure their life span and safety.

It is hoped that the findings and recommendations will enable the different libraries to improve their Preservation and Security methods.

DIRECTIONS:

(a) Thick ( ) against the appropriate answer.

(b) Blank spaces, usually signified by others (specify)

.....

are left for any answer not provided.

NAME OF LIBRARY: .....

NAME OF INSTITUTION: .....

LIBRARY STAFF STRENGTH (a) LIBRARY PROF./MEDIA SPECIALIST
.....

(b) Intermediate/Media Technician
.....

(c) Junior Staff/Media Aide
.....

YEAR LIBRARY WAS ESTABLISHED: .....

GENERAL:

1. Capacity of your library: .....
2. Population of users: .....
3. Total number of your media library holding: .....
   i) Printed non-book materials (vols): .....
   ii) Graphic materials (vols): .....
   iii) Hardware (Equipment): .....
   iv) Others (specify): .....

4. TYPES OF MEDIA MATERIALS:

Tick any of the available media materials in your Library, from the list below:

(a) Pamphlets, (b) Maps, (c) Charts, (d) Photographs

(e) Art prints, (f) Slides, (g) Filmstrips,

(h) Overhead transparences, (i) Film catridges,

(j) Video tapes, (k) Photographic films (l) Audio tapes

(m) Audio discs, (n) Microfilms, (o) Microfiches,

(p) Computer output microfilm

(q) others (specify) .....

5. Tick any of the available media equipment (hardware) in your Library, from the list below:

a) Filmstrip viewers b) Microfilm readers

c) Microfiche readers d) Camera - photographic

e) Video cameras f) Enlargers

g) Open reel or reel projector h) Record/players

i) Slide projectors j) Television sets k) Tape recorders

l) Video machines m) Film projectors n) Radios

o) Amplifiers p) Flash Guns q) Darkroom alarm clock.

PRESERVATION:

HOUSEKEEPING:

6. How many times do you clean the media unit of the Library?

a) Daily

b) Twice weekly

c) Weekly

d) Monthly

e) Any other (specify): .....

7. Do you have a specific staff for the cleaning of media materials and its environment?

a) Yes

b) No.

LIGHT:

8. Is it possible for the rising or setting sun to strive directly on any of the medium kept on the shelves?

a) Only rising sun

b) Only setting sun

c) Both rising and setting sun

d) None of the above

e) Others (specify): .....

9. If you use fluorescent electric tubes for illumination within your Library, what additional treatment do you give them?

a) Shaded to reduce illumination

b) Coated with ultra-violet filters

c) None of the above

d) Others (specify): .....

EXCESSIVE HEAT AND HUMIDITY:

10. What air-conditioning system do you have in your library?

a) Central air-conditioners

b) Unit air-conditioners

c) None

d) Others (specify): .....

11. How often are the air conditioners on?

a) Less than 8 hours daily (3.30 closing time)

b) 8 hours daily 3.30 a.m. - 3.30 p.m.)

c) 24 hours a day

d) No air-conditioners

e) Others (specify): .....

12. What instrument do you use to measure temperature and humidity?

a) Psychrometer (temperature)

b) Hygrathermograph (humidity)

c) No measurement is taken

d) Others (specify): .....

FUNGUS:

13. Have you ever noticed fungus attack on your media materials?

a) Yes, plenty of them

b) No, just little

c) Never

d) Others (specify): .....

14. If Yes in question (13) above which type of medium experienced this?

a) Paper (manuscript, documents, printed/sheets, arts work)

b) Photographs

c) Slides

d) Microforms

e) Motion picture film

f) Video tape and disc

g) Computer software

h) Sound recordings

i) Others (specify): .....

15. What did you to to combat the menace in question 14 above?

a) Destroyed the affected medium

b) Isolated them and kept in a store

c) Fumigated them with fumigicides

d) Clean them with a brush and soft cloth immediately

e) Nothing is done

f) Others (specify): .....

16. Now often do you organise checks for any fungal attack?

a) Once during rainy season only

b) Once a year

c) Twice a year

d) Thrice a year

e) Others (specify): .....

17. What is the level of awareness of your staff of the harm that fungus can do on media materials?

a) All senior staff are aware

b) All senior and intermediate staff

c) All junior staff only

d) Only the media specialist

e) None of the above

f) Others (specify): .....

INSECTS:

17. Which of these insects do you find in your library often?

a) Cockroaches

b) Termites

c) Moths

d) Silverfish

e) None

f) Others (specify): .....

19. What standing instructions are given to your staff with regard to the presence of these destructive insects?

a) To report their presence

b) To use insecticides on them

c) To kill without insecticides

d) To instructions

e) Others (specify): .....

DIRT AND DUST:

20. How do you protect media materials from dust and dirt?

a) Covered with polythene bags

b) Encapsulation

c) In boxes

d) In cabinets

e) On shelves

f) Others (specify): .....

21. How do you restore media materials through this threat?

a) Emphasis on cleanliness

b) Using spray cleaners

c) Using alcohol solution

d) Packaging the machines

e) Others (specify): .....

HUMAN CAUSES:

22. What standing instructions are given to the staff on the basis of handling techniques?

a) Storage according to media

b) Handling according to instructions attached on each medium

c) No instructions

d) Others (specify): .....

23. What deteriorative stage has been experienced with the handling of media materials, in your library?

a) Picture tearing

b) Scratches on films

c) Discolorated media

d) Only hand touching

e) Leaving clips, pins to rust materials

f) Faulty equipment

g) Others (specify): .....

24. What method of awareness do you use in your library?

a) User education programmes

b) Only instructions attached to storage areas

c) Instructions only on the use of the machines

d) Others (specify): .....

SECURITY:

THEFT/BUILDING:

25. Has your library ever been burgled?

a) Yes

b) Attempted but failed

c) No

d) Others (specify): .....

26. If 'Yes', through which structure did the thief enter?

a) Door

b) Roof

c) Window

d) Others (specify): .....

27. What additional anti-burglary protection do you have on your library/media unit windows?

a) Wire netting

b) Expanded metal rods

c) Locks that only staff can open with key

d) No additional protection

e) Others (specify): .....

FIRE:

28. What items can a person inside the library handover to someone outside through an open window?

a) Printed non-book

b) Graphics materials

c) Software

d) Smaller hardwares e.g. cameras etc.

e) None

f) Others (specify): .....

29. For how long do you have electricians in your library/media unit?

a) No electrician on duty

b) Whenever the library is open

c) 8 hours (7.30 a.m. - 3.30 p.m.)

d) 7 1/2 hours (3.30 p.m 11.00 p.m)

e) Others (specify): .....

30. What type of fire protection device do you have in your library?

a) Handy fire extinguishers

b) Automatic sprinkler system

c) High expansion foam

d) Carbon dioxide

e) Others (specify): .....

31. Which category of your staff are taught some basic fire fighting techniques?

a) All staff

b) Only senior staff

c) Only junior staff

d) None of the above

e) Others (specify): .....

FLOOD:

32. If water gets into your library, by what means does it flood?

a) Window

b) Doors

c) Roof

d) Faulty taps

e) Others (specify): .....

33. What measures do you take to restore deteriorated materials back as in question (32) above?

a) If damaged beyond repair, request for fund to acquire

b) Dispose of them

c) Make necessary repairs of damages in the building

d) Wait for directives to repair leakage

e) Others (specify): .....

COMPARISON OF THREATS TO MEDIA MATERIALS:

34. Tick the problems you have experienced in your library from among the list below:

a) Light (natural and artificial)

b) Excessive heat and humidity

c) Damage by fungus

d) Damage by insects and pest

e) Damage by dirt and dust

f) Damage by man's carelessness

g) Theft

h) Fire

i) Water or flood

j) Others (specify): .....

35. From the list provided below mark a, b, c etc., against the commonest ones, that is the most prevalent:

a) Damage by light

b) Excessive heat and humidity

c) Damage by fungus

d) Damage by insects and pests.

MEASURES TAKEN ON PRESERVATION AND SECURITY:

STORAGE:

36. Tick the available storage facilities in your library.

a) Shelves

b) Boxes

c) Cabinets

d) Containers

e) Cupboards

f) Covering bags

g) All the above

h) None.

37. Do you have a separate store besides the readers area for storage?

a) Yes

b) None

38) If yes in question (37) above, how often do you organise checks for their health and safety?

a) Daily

b) Weekly

c) Monthly

d) Occasionally

e) None.

STAFF TRAINING:

39. Is your staff in charge of media materials trained too handle them?

a) Yes

b) No.

40. What plans do you have for staff training on media materials?

a) Formal

b) Informal

c) All of the above

d) None.

MAINTENANCE AND REPAIRS OF MATERIALS:

41 Do you maintain equipment in the library?

a) Yes b) No.

42. If 'Yes' to question (41) above, how often?

a) Monthly

b) Quarterly

c) Biannual

d) Annual

e) Occasionally

f) Others (specify): .....

43. Do you experience breakdown of equipment?

a) Yes

b) No.

44. If 'Yes' to question above, what measures do you take to repair broken down equipment?

a) Repair it yourself

b) Repair it using library technician

c) Repair it using external technician

d) Leave it unrepaired

45. If your response to the question is (d), why?

a) Lack of funds to repair them

b) Lack of spare parts in the country

c) Lack of competent technicians to repair the equipment

d) Too expensive to repair.

INSURANCE:

46. What insurance coverage have you given your library?

a) Insured, jointly with the Institution

b) Insured separately

c) Not covered by any insurance

d) Others (specify): .....

CLOSE ACCESS:

47. For Security reasons,do you restrict the category of clients that the media collections, especially electronics?

a) No restrictions

b) Restricted to senior staff and researchers only

c) Restricted to only staff on training

d) Restricted to students

e) Not applicable

f) Others (specify): .....

48. Do you allow clients to borrow media materials out of the library?

a) Yes

b) No

c) Sometimes but failed

d) Others (specify): .....

SURVEILLANCE:

49. How many entrances and exits are used by users in your library? .(State Number):

a) Entrances

b) Exits.

50. What category of the library staff guard the exit?

a) Attendants

b) Assistants

c) Messengers

d) Security men

e) Others (specify): .....

51. What other device do you employ to check illegal removal of materials:

a) Electronic devices

b) Camera surveillance

c) Alarm system

d) Others (specify): .....

33. What recommendations can you make to improve the methods of preserving and Security of media materials in libraries:

.....

.....

.....

.....

.....

APPENDIX 2

Department Library and
Information Science,
Faculty of Education,
Ahmadu Bello University,
Zaria.

28th June, 1993.

Dear Sir/Madam,

I am a Post Graduate student currently working on a project titled "Preservation and Security of media materials in selected libraries in Kaduna, Zaria and Jos". This study has been necessitated through personal interest and other published works I have read.

I shall be very grateful if your Library/Media Unit can fill out the attached questionnaire, which is intended to collect data for the study.

It is possible that a single professional colleague may not answer the questions completely. I shall therefore appeal that the designations only of all staff supplying the information and their ranks be supplied at the back of the questionnaire.

Thanks for your kind cooperation.

Yours faithfully,

D. I. A. Boyis (Mrs.)

APPENDIX 3

AHMADU BELLO UNIVERSITY, ZARIA-NIGERIA
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
(OFFICE OF THE HEAD OF DEPARTMENT)

Date: 20th April, 1994.

TO WHOM IT MAY CONCERN

Mrs. Deborah I. A. Boyis

This is to certify that the above-named is a Master student in the Department of Library and Information Science, Ahmadu Bello University, Zaria.

She is working on a research project in partial fulfilment for the Master of Library Science (MLS) Degree. I would be most grateful if you could allow her use your library for the purpose of collecting available data.

Thank you.

Yours sincerely,

L. A. Abba,
For: Head of Department