

**PRESERVATION AND SECURITY OF INFORMATION
RESOURCES IN ACADEMIC LIBRARIES IN NIGER
STATE, NIGERIA**

BY

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AUGUST, 2016

DECLARATION

I hereby declare that the work in this Dissertation titled Preservation and Security of Information Resources in Academic Libraries in Niger State has been carried out by me in the Department of Library and Information Science. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

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CERTIFICATION

This Dissertation entitled PRESERVATION AND SECURITY OF INFORMATION RESOURCES IN ACADEMIC LIBRARIES IN NIGER STATE BY FATI ABUBAKAR meets the regulations governing the award of the degree of Master in Library and Information Science of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This dissertation is humbly dedicated to my late father, Mallam Muhammad Tukur, and my late son, Muhammad Abbas Abubakar.

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LIST OF ABBREVIATIONS / ACRONYMS

CD-ROMs	Compact Disk - Read Only Memory
CD	Compact Disc
COE	College Of Education
CCTV	Closed-Circuit Television
FUT	Federal University of Technology
IBBU	Ibrahim Badamasi Babangida University
ICT	Information Communication Technology
ID	Identification
IFLA	International Federation of Library Association
ILL	Inter-library Loan
LSM	Library Security Management
OPAC	Online Public Access Catalogue
RFID	Radio Frequency Identification

ABSTRACT

This study was on Methods to Preservation and Security of Information Resources in Academic Libraries in Niger State, Nigeria. Five research questions and five corresponding objectives were framed for the study. A case study design was adopted for the research. Purposive sampling technique was used to select 35 respondents from a population of 297 staff in all the twelve academic libraries in Niger State. Semi structured interview guides were used to collect data from respondents, while field notes guide were used to record data in respect of participants' observation. The data collected using individual interview guides and the field notes guides, which were properly completed, were presented and subjected to qualitative analysis. The steps followed in doing the analysis were documentation, conceptualization, coding and categorization, examining relationships and displaying data; and authenticating conclusions. The findings revealed that the common methods of preservation of information resources in academic libraries in Niger State included repairs, binding and environmental control, whereas digitization and migration were not adopted. It also showed that periodic random checks on users and staff, scheduled patrols, and checking of users IDs, were all in use. Further, antivirus software and passwords were installed on computers of five libraries, while surveillance cameras were functional in only Federal University of Technology Minna Library. Book theft, mutilation of information resources, non return of borrowed library materials, impersonation, and computer virus attacks were the prevalent threats in all the academic libraries in Niger State. The findings also showed that there were policies guiding the operations of the academic libraries in Niger State, but they do not have insurance covers. In respect of effectiveness of the methods in use, the findings showed that repairs, binding, environmental control, regular patrols, and identity cards verifications were effective in all the academic libraries, while computer virus protection / internet security

was effective in four libraries and Closed Circuit Television (CCTV) cameras in only Federal University of Technology Minna Library. It was concluded that although academic libraries in Niger State have adopted good methods for preserving and securing their information resources, and the fact that they paid more emphasis on printed materials, with less use of digital preservation methods and electronic security systems, it is obvious that the libraries are yet to embrace the opportunities offered by technological advancement for such activities. In view of the findings, the research recommended that libraries should endeavour to have written policies on all aspects of preservation and security of information resources, upgrade and maintain facilities such as binderies, air conditioning systems, fire prevention equipment etc including the adoption of digital preservation methods, while efforts should be made to reduce the incidence and effects of mutilation, book theft and non-return of borrowed materials through periodic repairs, enhanced security and adequate punishment for erring users, respectively. This research also recommended improvement of the manual methods of safeguarding library materials and adoption of electronic security system, while the antivirus software and CCTV cameras should be regularly updated and upgraded respectively, in order for them to be effective.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Academic libraries refer to those libraries established in tertiary institutions to support and strengthen the academic programmes of such tertiary institutions of learning. These include libraries of universities, colleges of education, polytechnics, and other post-secondary education institutions. Lawal and Opeola (2012) defined an academic library as any library that caters for the needs of those engaged in academic pursuits in higher institutions like the universities, colleges of education, colleges of technologies and polytechnics.

The services provided by an academic library depend to a large extent on the quality and quantity of its collections and staff. For effective service delivery, it is necessary to equip the libraries with adequate information resources comprising of print and non-print information resources for the users. Ideally, academic libraries are expected to support their parent institutions in achieving their educational objectives. Thus, the main functions of academic libraries are acquisition, preservation and dissemination of information to users. The development of library services is generally correlated to the development of educational programmes. This view is supported by Krashen (2011) who maintained that it is not out of place to say that the establishment of school or college libraries has a positive correlation with educational quality at school or college levels. Academic libraries have not only become instruments for national development but are today regarded as centres for academic research. They contain far more information than any person could imagine. The roles of academic libraries cannot be over-emphasized. This is why the quality of education received in any institution of higher learning is measured by the resources in its library and the extent of use of those resources by the students and

faculty members. Francis, Lance, and Lietzau (2010) stressed that the size of a collection is used as an indicator of academic quality. They further emphasized that it has been empirically demonstrated that there is a strong correlation between the size of university libraries collections and excellence of universities.

Information Resources are basically sources through which information can be gotten so as to meet the information needs of users. They are channels through which ideas, opinions, or feelings are stored or preserved. Information resources found in libraries can be classified into print, non-print, electronic and digital information resources. Print information resources include books, serials, encyclopaedia, dictionaries, handbooks, almanacs, and directories. Non print information resources are items such as compact disk, audiovisuals, tapes, slides, microfilms, and microfiche, etc. Thus, academic libraries primarily build their collections to meet the information needs of the users. The users, according to Edegbo (2011), are therefore equipped with intellectual and physical skills that they require to be innovative and self-reliant members of the society.

The collections in academic libraries should include all types of information resources in order to satisfy the information needs of faculty members. And for easy access to users, there is need for proper organization and management of the information resources. For instance, Ekwelem, Ukwoma and Okafor (2011) argued that the university library as an example of academic library is the principal instrument of any university in the conservation of recorded knowledge. The library has to collect materials, published and unpublished, print and non-print, in some depth and in almost all fields of knowledge, not necessarily in those offered in the university. A lawyer for instance, spends hours in a library studying cases to prepare for a case in court and doctors use medical libraries to obtain information in order to treat illness. Libraries have long stored information materials

that enable ideas, knowledge and experiences to be passed on from generation to generation.

Electronic information resources are those information resources and services that users access electronically via a computing network from inside the library or remotely to the library Hargreaves (2011). Tammaro (2006) notes that electronic resources include websites, online databases, e-journals, e-books, CD-ROMs, audio visuals, multimedia, etc. As revealed by Gohain and Saikia (2013), electronic services are email based services, the libraries' online public access catalogue, web portals, gateways, and the internet.

Preservation and security of information resources and services are integral library operations that can make libraries to remain perpetually useful. Walker (2013) defined preservation as 'all managerial, technical and financial considerations applied to retard deterioration and extend the useful life of materials to ensure their continued availability. Bessy, Abalaka, Dauda and Okikiri (2014) on the other hand defined preservation as activities which include all the managerial and financial considerations, including storage and accommodation provisions, staffing levels, policies, techniques, and methods involved in preserving library and archival materials and the information contained in them.

Ogunniyi and Adejube, (2014) had indicated that for decades librarians have tended to mix up preservation with conservation and all efforts have concentrated on the curative treatment of single documents. Conservation and restoration are the most central activities of preservation; they are concerned with the physical maintenance and repair of documentary materials. According to Olatokun (2008) conservation is a field of knowledge concerned with the coordination and planning for the practical application of the techniques of binding, restoration, paper chemistry, and other material technology, as well as other knowledge pertinent to the preservation of archival resources. Conservation can be further characterized as both preventive and remedial. Preventive conservation consists of indirect

action to retard (slow) deterioration and prevent damage by creating conditions optimal for the preservation of materials while remedial conservation consists mainly of direct action carried out on documents in order to retard further deterioration.

Conservation is also seen as a specific term, referring to the physical treatment of individual items, usually after some damages must have occurred. Olatokun (2008) is of the view that preservation is an umbrella term for many policies and options for conservation treatments. Every institution that has a collection of enduring value should have a preservation plan for it. Schur and Harris (2006) put forward a model for assessing possible preservation and conservation of library materials. These include:

- i. Minimal or small programme level.
- ii. Middle programme level.
- iii. Optimal or full scale programme level.

Minimal or small level programme refers to the measures that are taken to improve the physical handling of materials when they are circulated amongst the users. It is this minimal level that Abioye (2008) referred to as “every-day book care” which consists of:

- a) Cleaning the library and the book stock.
- b) Shelving and careful removal of books from the shelves and replacing them.
- c) Careful use of books during reading.
- d) Photocopying; and
- e) Minor repairs which do not need special tools or expensive materials.

The middle level programme refers to all elements under the minimal level plus preventive conservation. This includes environmental control and provision of a moderate stable temperature, humidity and control of exposure to light and pollutants. At this stage, the air conditions are very important because they are the best means of stabilizing temperature and humidity. It also helps to filter out particulates and chemical pollutants such as dirt,

dust, smoke etc. In areas where electricity facilities for cooling are not constant or available, the use of windows is highly recommended to ensure good air-circulation.

Optimal or full scale programme embraces both minimal and the middle levels and includes direct intervention. This level gives much attention to preservation by substitution or reformation which involves reproduction or stabilizing the media to preserve the information contents. This can be achieved by microfilming, photocopying, de-acidification, lamination, binding and digitization.

Methods of preservation and security of library information resources are age long strategies that can be traced as far back as 539BC in Egypt when the library books were chain-locked to prevent them from theft (Maidabino, 2010). Similarly, Walker (2013) revealed that in the Assyro Babilonian civilisation, Assurbenipal's library at Nineyah had used catalogues as part of an internal method of bibliographic control and a form of security while during the Greek civilisation papyrus rolls at Alexandria were stamped with the library's ownership stamp as well as copying documents – to enable the libraries retain the originals while they lent out the copies to library patrons. This practice was also adopted by Roman libraries during their own period of civilisation, and during the middle ages until between the 9th and 12th centuries (i.e. the Post- Carolingian Age), when monastic libraries demanded real security commitments in the form of deposits from their patrons before books could be lent out. The author also reported that during the medieval period, some cathedral libraries such as Hereford Cathedral and Wimborne Minster in Dorset, England; and university libraries such as Oxford and Cambridge adopted the process of chaining their books alongside the cataloguing of books; whilst copying had declined as a result of the invention of the printing press. Other methods included preserving the physical existence of the documents by treating papyrus rolls with cedar oils

or naturally made insecticides, after which the rolls were subsequently stored in earthen vessels or chests of cypress wood.

Anunobi and Okoye (2008) have also indicated that Nigerian academic libraries are faced with hybrid challenges of managing resources, one of which is the issue of security of library collection. They are of the opinion that book theft is a major security issue in the libraries; with special collections being the most targeted materials and that some library staff take materials from the library without checking them out.

Academic libraries acquire and process into retrievable form and make available the information contents to the academic community and the public for their teaching and research work, however, in fulfilling these functions they face pressures due to overuse and other abuses from users. With the colossal amount being spent on academic libraries, it is expected that adequate planning be put in place to preserve the resources in them from deterioration and destruction. Vellani (2010) summarily opines that: “early libraries were very conscious of security of their libraries as evidenced from the various security methods employed”. While some of these security methods continued to be adopted in present day libraries, others have been modernised, with technological advancement opening new frontiers for preservation and security of information resources and services in the numerous academic libraries. Yet incidences of theft and mutilation of information resources and services continue to pose great challenges to the sustainable development of academic libraries in Nigeria. This explains why from the earliest time to the present, librarians have been concerned about how to protect their information resources from theft and damages.

Niger State has twelve tertiary institutions made up of federal and state owned institutions which consist of universities, polytechnics, colleges of education and monotchnics. Niger State College of Education, Minna was the first higher institution

established as an Advanced Teachers College by the defunct North-western state government. According to the Niger State College of Education Students' Hand Book (2008), the College was sited in Minna in 1975. The aim was to encourage the spirit of enquiry and creativity in teachers and to provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situation. Other higher institutions include the State and Federal Polytechnics which aimed at giving training and imparting the necessary skills for the production of technicians, technologists, engineers and other skilled personnel who shall be enterprising. There is also Fati Lami Abubakar College of Legal and General Studies whose aim is to train and produce middle cadre manpower for the State ministries of Justice, Information and Education. The State University, which was established by the Niger State University Law of 2005, commenced academic activities during the 2005/2006 session. The Federal University of Technology Minna came into being on the 1st of February 1983. Both universities are centres of excellence in the sciences and humanities which produce globally competitive enterprising graduates with the requisite knowledge, skills and entrepreneurial competences, using higher quality facilities. School of Nursing, School of Midwifery and Health and Technology were established for the production of medical personnel needed in the State.

1.2 Statement of the Problem

Academic libraries in Niger State, like those in other parts of the country, were established primarily to meet the information needs of their parent institutions through the collection and preservation of information resources to support teaching, research and dissemination of knowledge. For information resources to serve the purposes for which they are collected, they need to be preserved and secured in such a way that their life spans are prolonged so as to sustain their utilization by the academic communities. Preliminary

observation of some tertiary institutions' libraries in Niger State by the researcher revealed that some of their resources had either been stolen or were mutilated, and were subjected to treatments that could reduce their life spans. The ugly situation of some tertiary institutions' libraries suggested that there might have been some lapses in their preservation and security activities. However, the scope of previous research on this very important subject matter in Niger State was limited to few methods and few academic libraries only. For instance, the work of Garba (2008) covered Federal University of Technology Minna Library, Federal College of Education, Kontagora Library and Niger State Polytechnic, Zungeru, Library. On their part, Oyedun, Sani and Odoakang (2014) had surveyed the Federal University of Technology Minna Library and the Niger State College of Education Minna Library.

From the foregoing, it is obvious that there existed some information gaps in respect of the status of preservation and security of information resources in majority of the academic libraries in Niger State. One wonders what could be the preservation and security situation in those libraries that have never been surveyed, or even the general prevailing methods / systems adopted across the State for preservation of information resources in all the academic libraries? The answer to these questions constitute gap in knowledge which this research attempted to fill, in order to improve on the methods / systems of preservation and security of information resources in the academic libraries in Niger State, Nigeria.

1.3 Research Questions

The following research questions were framed so as to achieve the study objectives.

1. Are there policies for preservation and security of information resources in academic libraries in Niger State?
2. What methods of preservation of information resources are adopted in academic libraries in Niger State?

3. What methods of security of information resources are adopted in academic libraries in Niger State?
4. What security threats to information resources are prevalent in academic libraries in Niger State?
5. How effective are the methods adopted for the preservation and security of information resources in academic libraries in Niger state?

1.4 Objectives of the Study

The objectives of the study included the following:

1. To determine the preservation and security policies in academic libraries in Niger State.
2. To examine the methods adopted by academic libraries in Niger State to preserve their information resources
3. To examine the methods adopted for security of information resources in academic libraries in Niger State.
4. To identify the security threats to information resources in academic libraries in Niger State.
5. To determine the effectiveness of the methods of preservation and security of information resources adopted by academic libraries in Niger State.

1.5 Significance of the Study

Preservation and security of information resource in academic libraries has become a difficult task as a result of man-made and natural disasters, or due to poor methods of preservation and security of library information resources. The crimes committed by users of these resources, have deprived many others from fully achieving their information needs. The result of this study therefore would contribute to knowledge by establishing key

aspects of methods to preservation and security of information resources. The findings would highlight the comparative effectiveness of preservation and security of library materials, among academic libraries in Niger State. This would serve to challenge and encourage the libraries, and the management to develop and ensure the implementation of preservation and security policies, which could lead to positive changes in attitudes and therefore methods of staff and users for better and sustainable preservation and security of information resources.

1.6 Scope of the Study

This study covered all the twelve tertiary institutions in Niger State, and the library staff, comprising the Professional and Para-professional staff, as the subject of the study. The case study covered the main methods adopted for preservation and security of information resources by the twelve academic libraries, the responsibility of which lies with the library staff only. Therefore, users of the information resources were excluded from the individual interviews conducted.

1.7 Basic Assumptions

The following assumptions were made for the study.

- i. Securing and protecting information resources could help academic libraries to provide effective service in response to the information needs of the university community.
- ii. Libraries with well-preserved information resources could achieve longevity, accessibility and effective provision of services to users.

1.8 Operational Definition of Terms

The following terms are defined in the context of this study to enhance their understanding and use.

- i. Professional Staff – These are trained librarians that have relevant degrees in librarianship or any other degree in other fields and are working in academic libraries.
- ii. Para-professional Staff – These are library support staff that have diploma in library science or similar certificates and work in academic libraries.
- iii. Tertiary Institutions – These institutions include universities, polytechnics, and colleges of education, mono-technics and all other post secondary school institutions of higher learning.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed literature related to the study, and in order to do this, the following headings were adopted.

2.2 Policies for Preservation and Security of Information Resources in Academic libraries

2.3 Methods of Preservation of Information Resources in Academic Libraries

2.4 Methods of Security of Information Resources in Academic Libraries

2.5 Security Threats to Information Resources in Academic Libraries

2.6 The Effectiveness of Methods of Preservation and Security of Information Resources in Academic libraries

2.7 Summary of Literature Review

2.2 Policies for Preservation and Security of Information Resources in Academic Libraries

Before any security measures could be put in place, it is important to assess the security needs of the institution and determine the possible effects of security procedures on staff, users, and information resources. A security policy should address the physical security, such as building and perimeter security; security access for example, access by staff and users to storage areas, security during lending and transport; exhibition security; security of computer systems including authorised to and authorised manipulation of data. The need to safeguard the information resources will influence the way in which it is housed. High security areas are often needed, but security that is too strict can defeat itself in the case of a sudden emergency. A sensible policy of controlled access should be in place whenever any secure storage plan is planned. A security policy must include the

users, and state for example, limitation of access to original information resources in favour of surrogates. It should also state clearly the responsibility for security of the information resources, both those of the staff and of the users. Procedures to be followed in case of a breach of security should be clearly set out, as should procedures for preventing, and coping with disasters. Traditional library collections contain a wide range of organic materials, including paper, cloth, animal skins and adhesives. Such organic substances undergo a continual and inevitable natural ageing process. While major steps can be taken to slow this deterioration by careful handling and providing a sympathetic environment, once a security assessment has been completed, the next task is to implement specific security measures, in order to reduce risk. The main risks to information resources are fire, flood, or other physical damage, as well as theft or vandalism. All information resources require a basic standard of care, but some require more attention and protection because they are difficult or impossible to replace. Information resources irrespective of medium and format require protection throughout their life, but issues of storage and handling are most urgent in the archival environment. Marisol (2004) observed that academic libraries in particular, assume a focal point where users' interests have to converge to utilise all the available resources that are relevant to their individual needs. As a result of this diverse use of the materials, these libraries stand to be vulnerable to all forms of crime and security risks from not only the users, but library staff as well.

The preservation policy lays down the criteria for the academic libraries to achieve optimum preservation standard. The policy should be flexible, subject to change to take account of future preservation demands and development. Preservation and security is the means by which library information resources are protected for the use of present and future generations. It is a way in which library information resources are safeguarded and kept in good physical condition. This can be done through a variety of measures aimed

both at minimising the risk of loss of library collections and slowing down as much as possible, the process of physical deterioration which affects most library information resources. The policy must help to ensure that every user of the library have equal opportunity to see and enjoy unique and important information resources because the university libraries are established to support this objective. The formulation of a preservation policy for the academic libraries in Niger State is therefore, an essential step in fulfilling all those responsibilities and gives the library direction it requires to initiate measures which are necessary for the protection of its information resources. Furthermore, it reminds the librarian and every user of the academic library of the constraints that they must accept if important information resources are to be saved for present and future generations. The policy will always be subject to change to take account of future preservation demands and development.

Developing a preservation policy will leverage efforts of academic libraries to achieve their preservation mission as it will stipulate the resources required to achieve the goal of preservation programme. It will also make library management to see preservation from a serious perspective and mobilise the necessary resources. Surprisingly, this aspect of library management is utterly neglected by libraries. Berry, Coad, Harris, Otley, and Stringer, (2009) posited that security planning and policy making is an essential but regrettably neglected area of the management of libraries and information centres and one which has implication for virtually all aspects of library operations.

There are many definitions of policy, Guel (2009) defined policy as a guideline for organisational action and the implementation of goals and objectives. Hennery, Ugwanyi and R.N.C. (2004) defined policies as statements that guide staff thinking in making decisions and handling work processes. Policies set limits within which to act. Stueart and Moran (2003) stated that there is difference between policy and objective. According to

them, objectives emphasise aims and are stated as expectation. Policies emphasise rules and are stated as instructions intended to facilitate decision making. Policy making, therefore, is a part of decision making, in that, policies emanate from the original decisions and become general statements or understanding that channel thinking in future decision making and serve as guidelines for actions, particularly those of repetitive nature, in order to create some sense of uniformity in the conduct of an organisation. Policies can be viewed as contingency plans because they are based on decisions that set the course of the plan.

According to Fenton (2008) policies are formal expression of the organisation's culture and belief systems. Some are so fundamental that they form the rationale for the whole organisation. Forde (2008) believed that policy should translate the organisation's guiding purpose, values and mission into statements which lay out rules on how the organisation intend to behave in principle in most circumstances.

Policies include on the one hand, major policies involving all segments of the organisation, and on the other hand, minor policies applicable only to a small segment of the organisation. Stuart and Moran (2003) categorised sources of policy into four namely:

- (i) **Originated policy:** is developed to guide the general operations of the library or information centres. Originated policy flow mainly from objectives and is the main source of policy making.
- (ii) **Appeal policy:** involves decisions needed by manager in their assigned areas of responsibility, and staff members are required to take it through the chain of command, where a common law is established.
- (iii) **Implied policy:** This type of policy is developed from actions that people see about them and believe to constitute policy. Usually, this type of policy is unwritten especially repetitive actions.

- (iv) Externally imposed policy: These are policies, which come through several channels, dictate the working of an institution but may be beyond its control. For example, no matter what policies are set for universities, the policies are subject to government regulation.

Stueart and Moran (2003) identified characteristics of a good policy to include the following:

- i. It must be consistent to maintain efficiency;
- ii. Flexible – policy must change as new needs arise
- iii. Distinguished from rules and procedures. Rules and procedures are firm, while policies, as guides, allow some discretion and latitude.
- iv. Written – A clear, well written policy facilitates dissemination. Because many policies affect individuals who have not been involved in their formulation, the policies should be discussed and widely circulated through letters, memoranda, announcements, and policy manual;
- v. Policy needs to be based on the mission of the organization.

Advantages of policies as enumerated by Stueart and Moran (2003) include:

- They are available to all in the same form
- They can be referred to, so that anyone who wishes can check the policy.
- They prevent misunderstanding through the use of a particular set of words.
- They indicate a basic honesty and integrity of the organization's intentions.
- They can be readily disseminated to all who are affected by them.
- They can be taught to new employees easily.
- They force managers to think more sharply about the policy as it is being written, thus helping achieve further clarity.

- They generate confidence of all persons on management and in the fact that everyone will be treated substantially the same under given conditions, and
- They help the manager to justify an action or decision.

The importance of preservation policy to the success of a preservation management programme cannot be over-emphasised. This view was supported by Akussah (2008), Alegbeleye (2008), Astle and Muir (2002), Popoola (2003), Stueart and Moran (2003), Bankole and Abioye (2005). According to Beagrie (2008), a policy statement which notes preservation as an essential part of the library's activities is required. Forde (2008) believed that conservation needs to be continuous, and a clear policy would identify appropriate techniques and established objectives, routinely monitor activities and allocate minimum basic finance.

According to the policy statement of the National Library of Australia "preservation policy is intended to define the Library's preservation responsibilities, and to provide guidance to library staff engaged in making decision and undertaking other activities that may have an impact on collection. It is also fundamental accountability document concerning one of the library's core businesses. It is intended to serve as the basis for communication with a range of external stakeholders.

Writing on preservation policy, Beagrie (2008) believed that in broad terms, a preservation policy should define an organisation's objectives and should include:

- A set of standards for storage, cleaning and handling of material;
- A programme of education for staff and users;
- A contingency plan for disaster recovery;
- A maintenance programme to clean and repair damage items;
- A priorities for conservation treatment of all types; and
- The use of surrogates to replace originals

Discussing the importance of a preservation policy Forde (2008) opined that a preservation policy:

- Reminds both staff and public of their obligations;
- Sets them out in a relationship that makes it clear that securing the survival of the materials requires joint action;
- Ensures that staff at the highest and lowest levels are made aware of the importance attached to preservation issues;
- Publicises that importance to the rest of the community;
- Offers transparency; and

Is a valuable document in the context of applications for funding being evidence of responsible stewardship.

Discussing preservation policy, Alegbeleye (2008) attributed the problem of microfilm management in Balme Library of University of Ghana to lack of preservation policy. While a study by Astle and Muir (2002) among libraries in United Kingdom revealed that 30 percent had a written policy, 30 percent were developing written policy, 30 percent had no policy, while 10 percent do not know whether they have policy or not. They concluded that until a formal preservation policy is in place, any attempt to raise significant funding for preservation activities is not likely to succeed as preservation policy is now a common requisite for consideration of application by funding bodies.

2.3 Methods of Preservation of Information Resources in Academic Libraries

The early preventive measures against theft and mutilation of library information resources by earlier libraries included warning, chaining, pledging, cataloguing and copying Raffensperger (2010). According to Griffiths and Krol (2009), during the Greek and Roman civilizations, papyrus rolls were stamped with ownership stamps as well as copying of documents. The libraries retain the original and loan out copies to library users.

In the middle ages, monastic libraries demanded deposits from patrons or patrons made pledges of returning the materials safe to the library before they were given the materials. Early public library report McGinty (2008) asserted that some cathedral libraries and universities of oxford adopted the practice of chaining their books. Careful arrangement was made for the chaining and cataloguing of the books and any book lost through negligence of the keeper was to be replaced by him on pay of a fine of 40 shillings. The keeper was also to deliver a public lecture in the library once a week and at Worcester, he also had to preach a sermon in the cathedral. McGinty (2008) also mentioned that the catalogue enables the libraries keep track of the collection, copying enables them lent out document, while still retaining the original, chaining of books ensures that expensive books were not stolen, deposits paid by patrons enabled them to return material too.

Preservation according to Ekwelem, Ukwoma and Okafor 2011 defines preservation as the branch of library and information science concerned with maintaining or restoring access to artefacts, documents different from conservation which refers to the treatment and repair of individual items to show decay or restore them to useable state. Wikipedia further defines preservation to be the process in which all actions are taken to check and reduce deterioration whereas conservation includes paper diagnosis of the decayed material, timely curative treatment and appropriate prevention from further decay. Preservation of information resources are done to safeguard the library information resources from further decay and disfiguration. Ogunyade (2005) posits that preservation of library information is of different types and that they include preventive measure which includes all format of direct actions aimed at increasing the life expectancy of undamaged or damaged elements of information resources. This comprises of all actions aimed at good housekeeping, care taking, dusting, periodical supervision and prevention of any possibility of damage by physical, chemical, biological and other factors. While curative measures

consists of all forms of direct actions aimed at increasing the life expectancy of undamaged elements of information resources, which includes repairing, mending, fumigation, classification, lamination and other jobs which are require considering the physical condition of the individual document. According to Odogwu (2008) and Sahoo (2006), preservation may be referred to as the activities associated with maintaining library information resources for use either in their original physical form or in some other useable way. This includes conservation, reformation, disaster prevention, and some collection development activities. Conservation can further refer to all the activities involved in the reactive and proactive treatment of library information resources to strengthen them physically or stabilize chemically, in order to sustain their survival as long as they are needed in their original form.

Preservation is a word, which is as old as the materials. The term implies proper storage of physical object, how the objects are kept in good order and arrangement. Preservation has been defined by various scholars. According to International Federation of Library Association (IFLA 2008), preservation includes storage and accommodation, provision, staffing levels, policies, techniques and methods involved in preserving library and archive materials and information contained in them. Preservation may be viewed as the totality of processes and operations involved in the protection of information resources against damages, or deterioration. Preservation may involve four related activities:

I) Maintenance

The daily care of information resources and archives, particularly in the current and semi-current records environ; when they are housed in offices, libraries or record centres; maintenance ensures the general protection of information resources against environmental hazards or other physical dangers.

II) Examination

This is preliminary procedure taken to determine the original information resources and structure of an item and to determine the extent of its deterioration, alteration or loss.

III) Conservation

Conservation refers to the intrusive protection of information resources or archival materials by the minimal physical and chemical treatments necessary to resist further deterioration, which will not adversely affect integrity of the original.

IV) Restoration

Restoration involves the repair of an item when aesthetics and reproduction of the original appearance is more important than the preservation of the integrity of the item. Restoration is generally viewed as an archival activity.

Preservation of information resources is a very important function of the library in prolonging the life and use of library information resources; particularly in academic libraries, whose primary task is building up its collection to support teaching, research and dissemination of knowledge. Basically, the principle of preservation and security of information resources are the same all over the world and apply to all types of libraries. It is the practical approach to the problem that varies according to environmental factors. The early librarians performed their curatorial functions diligently, but modern librarians have tended to neglect it. The goal of any preservation programme is to ensure long term, ready access to the information resources of an institution. Without preservation, security and conservation, access becomes impossible and decays and disintegrates (Olatokun, 2008). According to Sarika (2006) long term preservation demands suitable storage condition and good quality equipment to protect against the physical and chemical deterioration of information resources. Supporting Sarika's view, Ramasinghe (2008) states that the age, rarity and value of collections, as well as the information resources of which they are made,

their format, structure, size and shape will all determine the conditions under which they should be stored. He proceeded that some types of information resources will need greater security than others, and a different and or better controlled environment or extra protection. Ideally, preservation conditions should be adapted to the information resources of which the collections are made, but for higher institution libraries in the Niger State, this is not practical. There is no guideline on how to preserve the library information resources and this has led to the extent of degradation of information resources. The most used and frequent preservation techniques which are practical in the selected libraries of higher institutions in Niger State are by:

- Cleaning and dusting of information resources.
- Photocopying.
- Re-binding.
- Shelving library information resources to allow free flow of air.
- Provision of adequate security.
- Microfilming.
- Use of insecticide and insect repellent.
- Digital preservation is not wide spread in use in the selected libraries of the higher institutions while some do not even practice it at all.
- There are no clear standards in the area of media preservation and with most institutions lacking resources already; there are no clear details about how to tackle these issues.

Cleaning and dusting of information resources: sandstorms leave much dust on information resources. Once a sandstorm has passed, cleaning up should be done as carefully and as quickly as possible. Vacuum dusting using vacuum cleaners does less damage than manual dusting. Cleaners should be instructed on how to clean information

resources, otherwise ‘book slapping’ and the application of damp clothes to books covers and shelves may do more damage than any dust-storm. Ovowoh, and Iwhiwhu, (2010) identifies dust, water and insect as the factors that affect information resources. He recommends that they be cleaned regularly to remove dust, kept away from water, which can cause the resources to corrode, and kept away from insects. Olatokun, (2008) identify dust, moisture, unfavourable storage conditions, temperature and humidity to be the basic factors affecting magnetic tapes. In supporting Olatokun (2008), Schüller (2008) and AES-11id-(2006) recommend that magnetic tapes to be stored in cardboard or inner plastic and be rewound at least once a year. According to Stefano (2014), photocopying, digitization and microfilming are all technological tools for the preservation of all paper-based resources found in the libraries such as books, journals, newspapers, magazines and maps. Photocopy is said to be a device for duplicating books in order to preserve and multiply the ‘mother copy’. Although, this process has done more harm than good to the spine of the volume of such books or information resources. This happens so often to circulation and reference library information. Photocopying should be supervised, or the person in charge of photocopying should be trained to use the reproductive machinery. The reprographic method of preservation such as duplication, reprinting and photocopy is to make the information resources available to users thereby reducing the problem of scarcity, vandalism and mutilation etc., of information resources.

Ogunmodede and Ebijuwa (2012) highlighted some preservation of information resources as the physical treatment given to information resources such as binding, lamination and mending pages of information resources. Binding could be spiral or plastic binding which is applicable to pamphlets. Some of the security measures taken by this library of higher institutions in the state are:

- Mounting of security men at the exit and entrance to library to monitor the movement of users out from the library or information resource section.
- Fire fighting equipment (fire extinguisher) be mounted at strategic locations and sections.
- Security alarm mounted to keep library staff and users aware whenever there are any of the problems enumerated above.

Strategies have to do with the process of planning something or carrying out a plan with a view to achieving success in a particular endeavour. Hence, Ekwelem, Ukwoma and Okafor (2011) and Uguanyi (2004) see strategies for preservation improvement as plans, methods, ways and means of successfully preserving library information resources for as long as they are needed. Although, lots of problems combine to form great cogs in the wheels of effective preservation, there are certain measures that could be taken to enhance the longevity of information resources. If these strategies are very well made use of, a lot of prospects hold for preservation and security in academic libraries as well as other libraries. The first step to take care of any library information resource is to assess what you have. What kinds of formats encompass your library information resource? Is it books, papers, audio visuals, audio cassettes, CD-ROM, etc.? A small inventory will help you not only to access how many items a library has, but it will also help in the next step: to identify what problems your information resources may have and what you need to prioritize. Whichever format taken by the library to improve preservation and security issue has its problems that may need different solutions. The statement is in agreement with Akande (2009) who noted that such conditions include: temperature and humidity control, good housekeeping, control of sun light, scientific light, removal of aerosol and noxious gases from polluted air, improved storage, first class building maintenance and excellent care of books.

As it has been observed, after the library information resource has been assessed, next is the procurement of the preservation policy as far as practice is concerned. Having it is evidence that a library has started to involve itself meaningfully in fighting deterioration of information resources in the library. It is therefore, right to state that one of the strategies for enhancing preservation and security efficiency is the drawing up of the policy guidelines to direct its operations. It sets out the framework within which a collection is preserved and ensuring the preservation of information of future information resources through preventive and restorative conservation. Policy formulation is vital for its essence is the establishment of priorities. For a successful preservation and security, it is imperative that every library should endeavour to draw up a clearly articulated policy programme suited to its standard. Sound preservation and conservation programmes are multi-faceted. As Ovowoh and Iwhiwhu (2010) has outlined, the starting point of conservation programme is the creation of a policy document specifying, among other things:

- Preventive measure to minimize deterioration in storage and handling.
- Staff and user training programmes.
- Housekeeping routines to clean, and extend the life of materials.
- Security measure and contingency plan for disaster control and recovery.
- Substitution programmes.
- Conservation treatment for repair of damaged originals.
- Procedures for exhibitions and loans.

Maintaining an optimum resource storage facility is a core function of preservation. This practice, in particular, should be recognised as the primary means of guaranteeing the physical security and long term survival of library information resources. At the outset, therefore, the academic libraries in Niger State must comply with the following basic

directives in regard to the storage and retention of information resources in their various libraries.

- Sufficient space must be made available for the permanent and safe storage of academic libraries' information resources in Niger State.
- All storage areas must be safe and secured to minimize the risk of theft or malicious damage. For example, access points should be fitted with strong doors/barriers and adequate locking systems. Stores should be patrolled at regular intervals; stores should be equipped with sensitive security alarm system.
- All permanent and temporary storage areas must be structurally sound and sufficiently strong to withstand adverse weather condition and small scale vandalism or malicious attack.
- The library accommodation areas should be fire-proof and moisture-proof in order to reduce the possibility of serious accidental or damage of information resources.
- Environmental conditions in permanent storage areas must be carefully controlled and regulated to reduce the threat of atmospheric contamination of information resources.

The crimes which are committed by users of the academic libraries in Niger State have deprived many others from fully achieving their information needs. Vandalism, mutilation, defacement, theft, arson, etc are problems regularly encountered by the materials of these libraries. The extent, nature and rate at which these crimes occur vary from one academic library to another. In order to improve security and minimize crime in the academic libraries, the first is to ensure that all the information resources are processed as soon as they are brought to the libraries in Niger State before put for use. Some charging systems are used such as brown charging systems etc. Some libraries have computerized their charging system to make their operation faster. Whichever system a library adopts, it

is one of the means of detecting stolen books since due date are always on the date due slip of each book borrowed. Adebowale, Okiki and Yakubu (2013) noted that some charging systems enable the libraries to know the statistics of use or circulation of some books. The system also identifies some books that are missing and makes provision for their replacement if they are needed. While Ogbonyomi (2011) observed that avoiding application of keys, use of keys by few staff members, restriction of entry with brief cases or bags label on drawers, use of uniformed porters, efficient and cheap photocopying services, liberal loan services and the use of electronic devices will help reduce criminal activities in the library. Azerikatoa, Christopher and Sadat, (2014) observed that most academic libraries have library committees which assist in regulating the activities of the library, only very little is done on security and crime prevention in libraries. Neal further commented on library annual checking of their book stock and this enable catalogue cards for any books that are missing to be withdrawn, and so ensuring the accuracy of the catalogue as a guide to the stock. Also, any missing book replaced, or alternative titles purchased, any marked increase in the annual rate of loss is noted and though given to possible remedies. Among the ways to ensure preservation of the library materials is to ensure that all the information resources are processed as soon as they are brought to the library before they are put for use. In this way, the library will have bibliographic control over their collections; library staff should inspect records and items when they are returned by users, so as to reduce the removal of pages from collection of records and books; staff surveillance to check the movement of the library resources or the use of electronic security system; documents should be legally processed before checking out; CCTV installation in the reading area. This system conveys readers' activities to a central location where a staff member observed what goes on in the reading area; all library information resources should be stamped in a way that clearly identifies it as belonging to a particular institution. Library

stamps should be fast drying, non-fading, stable, and indelible. Systematic stamping of document is using easily visible, permanent semi-transparent, chemically inert inks that cannot be removed with ordinary ink eradicators; security tagging systems should be regularly inspected. Brief cases and handbags are left at the entrance of the library; de-acidification; lamination; photocopying; book binding; digitization; and staff security awareness programmes and review the security methods.

Ogunniyi and Adejube (2014) noted that, for decades, Librarians have tended to mix up preservation with conservation and all efforts have concentrated on the curative treatment of single documents. Conservation and restoration are the most central activities of preservation; they are concerned with the physical maintenance and repair of documentary materials. According to Olatokun (2008), Robberts and Etherington (n.d) cited in Ngulube (2003), conservation is a field of knowledge concerned with the coordination and planning for the practical application of the techniques of binding, restoration, paper chemistry, and other material technology, as well as other knowledge pertinent to the preservation of archival resources. Conservation can be further characterised as both preventive and remedial. Preventive conservation consists of indirect action to retard (slow) deterioration and prevent damage by creating conditions optimal for the preservation of materials. On the other hand, remedial conservation consists mainly of direct action carried out on documents in order to retard further deterioration.

Conservation is also seen as a specific term, referring to the physical treatment of individual items, usually after some damages must have occurred. Ogunmodede and Ebijuwa (2012) are of the view that today; preservation is an umbrella term for many policies and options for conservation treatments. Every institution that has a collection of enduring value should have a preservation plan for it. Olatokun (2008) put forward a model for assessing possible preservation and conservation of library materials. These include:

- i. Minimal or small level programme level.
 - ii. Middle programme level.
 - iii. Optimal or full scale programme level.
- A. Minimal or small level programme refers to the measures that are taken to improve the physical handling of materials when they are circulated amongst the users. It is this minimal level that Caroline and Alison (2011) referred to as “every-day book care” which consists of:
- a) Cleaning the library and the book stock.
 - b) Shelving and careful removal of books from the shelves and replacing them.
 - c) Careful use of books during reading.
 - d) Photocopying; and
 - e) Minor repairs which do not need special tools or expensive materials.
- B. The middle level programme refers to all elements under the minimal level plus preventive conservation. This includes environmental control and provision of a moderate stable temperature, humidity and controlling exposure to light and pollutants. At this stage, the air conditions are very important because they are the best means of stabilizing temperature and humidity. They also help to filter out particulates and chemical pollutants such as dirt, dust, smoke etc. In areas where electricity facilities are not constant or not available, the use of windows is highly recommended in ensuring good air-circulation.
- C. Optimal or full scale programme. It embraces both minimal and the middle levels; it also includes direct intervention with the materials. This level includes preservation, substituting, or reformation. Reformation involves reproducing materials into stable media to preserve the information contents. This can be achieved by:
- i. Microfilming

- ii. Photocopying
- iii. De-acidification
- iv. Lamination
- v. Book binding

2.3.1 Digitization of library Information Resources

Aina (2013) and Igbeka (2008), posit that advent of information communication technology (ICT) now made libraries to preserve their information resources through electronic method. Information on printed format can now be recorded in computer using compact disk (CD), diskette, flash drives and through digitization of library information resources. Internet services enable libraries not only acquire but also preserve in the storage media and are accessed through browsing, and downloading. Aina (2013) and Igbeka (2008) further defined digitization as the conversion of traditional library information resources (books and papers) to electronic form using computers, scanners, digital cameras, etc. He also concludes that digitization does not only minimize handling of materials but also prolong and preserve their lifespan.

Digitization is the transfer of information resources into electronic form, it allows conversion of information resources from paper or other form, to machine-readable form, which allows them to be stored and view electronically saving space and increasing accessibility. Migration and emulation are the two strategies that have dominated long – term preservation strategy for digital objects.

2.3.1.1 Migration

Nkanu and Henry (2010) defined migration as the periodic transfer of digital objects from one hardware/software configuration to another or from one generation of computer technology to a subsequent generation. The purpose of migration is to preserve the integrity

of digital objects and to retain the ability for clients to retrieve, display and otherwise use them in the face of constantly changing technology.

2.3.1.2 Emulation

Emulation is another method of the preservation of non print (electronic) information resources. Emulation strategy seeks to preserve that environment not through the preservation of original hardware/software but by using current technology to mimic the original environment. Gbaje and Bot (2009) posit that the essential idea behind emulation is to be able to access or run original data/software of a current platform that emulates the original platform.

Considering various methods of ‘prevention’, academic libraries should be prepared, where feasible, to copy information from original documents to alternative and more physically manageable media. This will reduce the need for direct reference to originals, thereby prolonging their lifespan by minimizing exposure to the physical dangers of actual loss or damage through excessive handling.

It is doubtful that many Nigerian libraries and archives have such policy documents. Ovowoh and Iwhiwhu (2010) state that “better storage conditions for books and other library materials, establishment of conservation policies in university libraries, as well as recruitment of preservation librarians would bring about a better conservation effect in the African scene.” Security of the library resources is crucial and very important. Students constitute the major offenders, the librarian should henceforth embark upon serious library orientation to teach the users not only how to use the library, but also the disadvantages of stealing and mutilating information resources.

2.4 Methods of Security of Information Resources in Academic Libraries

Before any security measures are put in place, it is important to assess the security needs of the institution and determine the possible effect of security procedures on staff,

users and library information resources. Security measures would be ineffective if the behaviour of those in the organisation are nonchalant about implementing the security processes. The security methods can be viewed from five factors; the librarian, processes, people, physical as well as technology perspectives and the existence of security culture in libraries. The framework should provide university and library management with a working instrument to assess and implement a more holistic approach to security management.

The term 'security', according to Wayne and Timothy (2011), refers to protecting collection from unauthorised use, displacement, defacement, modification and destruction. Libraries protect the following attributes of their information resources.

- Confidentiality – This infers that information resources are available only to those authorised at the various levels (controlled access to types of registered members).
- Integrity – The library has to make sure that the collection or the information they carry is not altered, accurate and complete. Therefore, management of its security needs to insulate the information resources from accidental or deliberate change to the contents. Accuracy refers to proper description of information resources, which are shelved or stored appropriately. Completeness refer to collections that are not mutilated, missing, decayed, miss placed, over borrowed, insulated from deliberate or accidental change, and secure from theft or vandalism.
- Availability – This refer to making sure that authorised users have reliable and timely access to information resources at the time they need it (timeliness) and at the promised times (appropriate opening hours) and through a reliable network system, which makes items available without delay.

The factors of security of information resources describe a plan for collection protection in libraries, combining the librarian, process, people, physical and cultural factors to ensure that a reasonable level of security management is in place, hence

minimizing risks to the library's main assets, its collections. The literature on security shows that security breaches often happen when the library premises are left unsecured. Oder (2004) maintains that security measures such as supervision, patrolling, and surveillance are lacking in libraries and keys are kept unsecured, if not in plain sight of the users. McDonald (2006) notes that the major challenge for new or renovated space is to incorporate flexibility while providing a safe and secure library environment. Non-return of library materials is a threat to the effective use of resources. Udoumoh and Okoro (2007) suggest that libraries create policies to ensure library resources are used effectively. Similarly, university libraries need to create an environment where primary resource materials are respected, handled carefully, and returned intact to the collection so that they might be studied again in the future.

Therefore, materials that are not meant to be used by patrons should not be accessible to them. For example, the unprocessed materials should be kept in a secured area; public access to special and rare collections should be monitored and physically protected to prevent vandalism, theft and other security breaches (Karim 2010). Studies conducted by Ajegbomogun (2007) and Holt (2007) identified rare books, manuscripts and special collections as frequent target of theft and mutilation because of the special demand for in depth studies of such materials. The above studies indicate that the processes that handle access to collection such as acquisition, technical processes, circulation, shelving and storage of items in libraries need to be considered from the security perspectives and assessed by a collection security measurement instrument.

Maidabino (2010), Ekwelem, Ukwoma and Okafor (2011), Ogunniyi and Adejube, (2014) reported high rate of book theft, mutilation and misplacing of books in Nigerian academic libraries. They suggested measures to reduce the problems, which include tightening security at library entrances and exits, expulsion of students involved in theft

and mutilation, provision of multiple copies of heavily used text, reducing the cost of photocopying, and periodic searching of students hostels and staff offices. Atkins and Weible (2003) believe that successful inventorying process helps identify missing items; however it may be dependent on the size of the library's collection. They proposed using interlibrary loan (ILL) data failure cases to identify materials missing from a library's collection instead. Brown and Patkus (2007) stressed that university libraries must ensure that access and storage areas for collection are arranged and monitored for quick and easy inspection. Special and rare collections in particular need to be stored separately, with separate folders within the collection so that they can be easily checked by the staff. Furthermore, a reliable and effective procedure for accessibility to such collection must to be created. Accessibility to library collections can also be enhanced by proper supervision and control of the library environment, especially designated areas for library assets. University library management must ensure that access to any area within the library is clearly defined and regulated. Staff should also enforce restrictions by challenging, in a non-confrontational manner, any unauthorised user found to be outside the designated public areas (Maidabino, 2010). These studies highlight the importance of considering the security aspects of physical and infrastructural perspective of library buildings and facilities to ensure collection security, thus implicating a factor that needs to be included in the assessment instrument.

In the methods of security all factors are of equal weight in ensuring that the confidentiality, integrity and availability of the library's information resources are maintained at a reasonable level.

2.4.1 The Librarian

Omoniyi (2001) and Bunwaree (2009) identify the librarian as the officer whose responsibility is to provide set of roles, policies and responsibilities and practices exercised

by members of a security team responsible for formulating objectives and policies, ensuring that objectives and policies are achieved, ascertaining that risks are identified and managed appropriately. This means that, university libraries should design a concise strategy with plans that articulate the vision and direction for securing the library information resources. Supporting Omoniyi and Bunwaree's view, Popoola (2003) said that the Library Security Management (LSM) team ideally should be chaired by senior personnel with representation, and members from the university's security department. The LSM team members should have the necessary experience and knowledge about security issues and management so that they can command authority to manage and ensure security compliance of information resources. Beers (2011), noted that in order to reduce the security threats of the information resources; risk assessment is undertaken to identify risk at various levels within the library setting so that security planning is prioritized.

Regular risk assessment of information resources involves compiling detailed information about library assets in terms of types and value of collections, identifying threats, vulnerabilities, possible risk situations, and estimating the cost of loss (cost analysis). This would show serious commitment to identify security problems and implement programmes to mitigate it. Library security breaches can be identified through meetings, questionnaire, observations, and reports. This should be followed by identifying what should be done to reduce risk, monitoring, revising and evaluating the risk process. The librarian factor stresses the need for library and collection managers to document, maintain, review and update risk policies and procedures as well as prepare reports via newsletters, interactive web pages or other in house publications to publicize security initiatives and create awareness amongst employees and users (Ugwuona and Omeje 2006 and Maidabino 2010). This factor provides evidence whether good security governance is in place in libraries.

2.4.2 The Operational Processes

This factor involves the processes of putting into operation security programmes formulated by the security management team through the relevant departments. These are; (a) the acquisition department, which is involved in accessioning and marking items to establish ownership, maintaining an inventory list which can be used to identify missing or misplaced or cost of items, and to facilitate backups and recovery processes (Holt 2007; Brown and Patkus 2007; Association of College and Research Libraries 2006; Atkins and Wible 2003; Omoniyi 2001); (b) the circulation department, which shelves and stores items for quick and easy inspection by users, creates manual or computer systems to record and track the use of the collections, control access, undertaking stock taking and inventory, report on delinquent borrowings, items that are lost, misplaced, stolen, abused, decayed or damaged; (c) the cataloguing and technical department, which processes and documents collections the library's catalogue system, verifies ownership of circulated items as well as attach identification marks to establish ownership and ensures that the status of unprocessed items are reported and access to them are controlled (Brown and Patkus 2007; Omoniyi 2001); (d) the special collections, which involves preserving and conserving information resources, controlling and monitoring access, proper inspection of the information resources before and after use and providing insurance coverage for valuable collections (McDonald 2006).

2.4.3 The People Factor: Training Programmes

This factor involves the staff or people aspects, particularly programmes involving staff being trained, retrained and made aware of policies and procedures on library security management processes. This should include security awareness being formalised in organisational policy and procedures and communicated to every employee who works with information resources (Sarika 2006). It stipulates the need to determine the

information resources security roles and responsibilities in university libraries and ways to handle supervise and monitor qualified and trained staff. Staff's knowledge of the availability of training programmes will help them handle security incidences, prepare reliable and useful reports.

2.4.4 Physical and Technology Factors

This factor involves both the physical and technical mechanisms in implementing a secure information resources environment. Maidabino (2010) assert that the physical environment refers to the safety and security of the library premises which holds the collections. The physical security measures should begin with the physical architecture of the building or management of space where information resources are held, controlling building entrances and exits; requiring identifications to access to general as well as rare and special collections areas; and scheduling patrols within building parameters. The technical aspect consists of the technology practices and procedures that the security of information resources programmes embraced. It refers to electronic security system and devices to handle security processes, control security breaches, and installation at strategic entry points of the library. Maidabino (2010) and Ameen etal (2007), identified security systems to include electronic anti-theft devices, visual cameras, smoke detection and alarm system at entrances, exits and stack areas in the library. This system will help prevent unauthorised removal of collections and feasible monitoring and detection of user traffic in general reading and reference rooms, as well as shelves areas

2.4.5 Security Culture

This factor encompasses acceptable user and staffs' attitudes and awareness toward the importance of protecting the information resources in the library. Awareness is an unseen element but is demonstrated through perceptions; such as (a) staff's attitudes about the importance of security policies and processes; (b) their awareness of security breaches;

and (c) the limitations of implementations McComb (2004); and Holt, (2007) refer to this situation as shared culture of mutual responsibility for security and safety where staffs are provided with the information and the tools to respond to a variety of situations and are able to take action when called upon to do so. According to Vellani (2010) this attitude and awareness “glues” or “grounds” the effectiveness of security librarian, management and operations. This importance is based on the premise that “organizations do not change, but people do, and therefore people change organizations”

2.5 Security Threats to Information Resources in Academic Libraries

The issue of security is of growing concern to university libraries and librarians. As a consequence, there is a vast literature on a range of problems concerning security in university libraries. Maidabino (2010) and Ugah (2007) consider security threats as formidable obstacles to information access and use. Such acts are serious problems that can result in user dissatisfaction. He identifies major security issues in libraries to include: theft and mutilation; vandalism; damages and disaster; over borrowing or delinquent borrowers; and purposefully displacing arrangement of materials.

According to Akor (2013) one major problem encountered in academic libraries security is that the security department of the parent body insists on providing security personnel for the library authority. The situation makes it difficult for the librarian to control security matters in his library as his orders may not be obeyed. Moreover, the security personnel posted to the library are often not literate enough to identify library information resources and prevent them from being stolen they are often gullible as library users often play on their intelligence.

Book theft is a major security issue in libraries, particularly in academic libraries, with special collections being the most targeted materials (Maidabino, 2010). A study conducted by Oyesiku, Buraimo, and Olusanya (2012) on academic library security

discovered a relationship between high rates of security problems and the growth of the university. Not all thefts are committed by patrons. Some library staff takes materials from the library without checking them out. This kind of theft, according to Osayande (2011) is one of the hardest to prevent, since library employees know how to defeat the security system. Oyesiku, Buraimo, and Olusanya (2012) describe theft as only one type of security breach. Others include non-return of items by borrowers, vandalism, and stock destruction.

Oyesiku, Buraimo, and Olusanya (2012) conducted a study on disruptive readers in academic libraries study in Olabisi Onabanjo University library, revealing that there is a lack of security in university libraries. Users resorted to delinquent behaviour because demand outstripped the supply of library material. This result in competition for resources, which invariably tempts users to steal, mutilates, or engages in illegal borrowing.

Disruptive behaviour is another security issue in libraries. A number of studies (Momodu 2002; Ajegbomogun 2007; Oyesiku, Buraimo, and Olusanya (2012), acknowledged that disruptive or criminal behaviour can cause security problems in the library. Difficult patrons include those who are intoxicated or using drugs, mentally disturbed, and some juvenile users. Oyesiku, Buraimo, and Olusanya (2012) assert that libraries have faced varying degrees of delinquency in the use of their resources. The extent of this problem varies from one library to another, but seems to be universal.

A number of studies have described how crimes and security breaches incidences can affect the provision of library services to users. Holt (2007) and Maidabino (2010) identified several such incidents, (i) theft of physical materials; (ii) theft or alteration of data; and (iii) theft of money as major security crime in libraries. Other forms of breaches include non-return of items by borrowers, theft of library equipment, personal theft (from staff and users), verbal and physical abuse against staff and users, and vandalism against library buildings, equipment and stock destruction, all of which can directly or indirectly

affects the provision of library services (Fatt, 2007). Similarly, Osayande (2011) reported how different forms of collection mutilation such as underlining and highlighting text in library books, tearing and or removing pages of books and annotating in books margins can temper with the subject-content of library collection, thereby making it unusable to users.

Aim of academic libraries is largely to provide access to both print and non-print collections and this makes it necessary to develop a balance between ownership and access to information or knowledge. This can be achieved by proper planning strategy including the planning for access control in line with the security requirement and the present and future mission or goals of the parent institutions. Ajegbomogun (2007) identified the types of security breaches in university libraries, which included theft and book mutilation and reasoned the cause to security lapses, insufficient or limited number of essential materials, and user's financial constraints. Ameen and Haider (2007) opined that access to collection is important as this service has supported scholarship in the humanities, sciences and social sciences and remains the key to intellectual freedom.

Most of the published literature on library security issues focuses on specific types of security breach. Theft, mutilation and vandalism are highly covered by research articles. Issa, Aliyu, Adedeji and Rachel (2012) highlighted theft and arson as threats to collections and proposed that libraries formulate a planned security measure to protect their collections. Boss also identified physical weaknesses in libraries in terms of unsecured windows, faulty emergency exits, unstaffed computer rooms, poor policies and procedures, lack of security plans, poor security points (exits, loading areas, windows, special collections) inadequate loans and renewal periods, lack of security manuals and poor signage as some of the causes of security breaches. Pérez, Manuel, and Amparo (2009) identified abuses in UK libraries, which included book and non-book theft, non-return of borrowed items, verbal and physical abuse, and vandalism against library buildings and

properties. Ewing also reported an estimated collection lost rate of 2.6% and that is between 1500 and 3000 books stolen annually.

2.6 Effectiveness of Methods of Preservation and Security of Information

Resources in Academic Libraries

The effectiveness has to do with the process of planning something or carrying out a plan with a view to achieving success in a particular endeavour. Hence, Ugwuanyi (2004) sees effective strategies for preservation improvement as plans, methods, and ways and means of successfully preserving library information resources for as long as they are needed. The first step to take care of any library information resource is to have a written policy that will guide the library to assess what it has. What kinds of formats encompass the library information resources? Is it books, papers, audio visuals, audio cassettes, CD-ROM, etc? A written policy will help you not only to access how many items a library has, but it will also help in the next step: to identify what problems your information resources may have and what you need to prioritize. Whichever format taken by the library to improve preservation issue has its problems that may need different solutions. The statement is in agreement with Alonzo, D. et al. (2003) and Cunha and Cunha (2004) who noted that such conditions include: temperature and humidity control, good housekeeping, control of sun light, scientific light, improved storage, first class building maintenance and excellent care of books.

As it has been observed, after the library information resource has been assessed, next is the implementation of the preservation policy as far as practice is concerned. Having it is evidence that a library has started to involve itself meaningfully in fighting deterioration of information resources in the library. It is therefore, right to state that one of the strategies for enhancing preservation efficiency is the drawing up of the policy guidelines to direct its operations. It sets out the framework within which a collection is

preserved and ensuring the preservation of information of future information resources through preventive and restorative conservation. For a successful preservation, it is imperative that every library should endeavour to draw up a clearly articulated policy programme suited to its standard. Sound preservation and conservation programmes are multi faceted. As Ovowoh, and Iwhiwhu (2010) has outlined, the starting point of conservation programme is the creation of a policy document specifying, among other things. Maintaining an optimum resource storage facility is a core function of preservation. This practice, in particular, should be recognised as the primary means of guaranteeing the physical security and long term survival of library information resources. At the outset, therefore, the academic libraries must comply with the following basic directives in regard to the storage and retention of information resources in their various libraries.

2.7 Summary of Literature Review

Preservation and security policies are the guiding covenants for the existence of any good library. Many literature reviewed by the researcher revealed the claims by academic libraries about the existence of preservation and security policies, but careful examination of such claims proved otherwise, because such policies were not well documented, or available in written format. A good example is the literature by Ovowoh and Iwhihu (2010) on “Preserving Information – Bearing Materials in Higher Education Institutions in Nigeria”, where 90% of respondents indicated the existence of policies on preservation, but interviews and observations revealed there were none in written forms. There is therefore the need for an appropriate research instrument that will be effective in verifying certain claims by respondents when carrying out similar studies. The adoption of interview and observation methods by the researcher obviously served this purpose.

Majority of the previous works reviewed agree that preservation methods encompass all the preventive and remedial actions that aimed at extending the useful life of

information resources in libraries. Preservation of information resources are done to safeguard the library information resources from further decay and disfiguration. Ogunyade (2005) posit that preservation of library information is of different types and that they include preventive measures which include all formats of direct actions aimed at increasing the life expectancy of undamaged or damaged elements of information resources. This comprises all actions aimed at good housekeeping, care taking, dusting, periodic supervision and prevention of any possibility of damage by physical, chemical, biological and other factors. On the other hand, curative measures consist of all forms of direct actions aimed at increasing the life expectancy of undamaged elements of information resources; such as repairs, mending, fumigation, de-acidification, lamination and other jobs which are required considering the physical condition of the individual document. Both Odogwu (2008) and Sahoo (2006) identified some preservation methods as the activities associated with maintaining library information resources for use either in their original physical form or in some other useable way. This includes conservation, reformation, disaster prevention, and some collection development activities. This assertion is supported by Rasaki (2012) who opined that long term preservation demands suitable storage condition and good quality equipment to protect against physical and chemical deterioration of information resources.

Overall, the studies by Ogbodo (2011) and Alhassan and Abdulsalam (2013) all agreed that repairs, air conditioning and binding were among the commonly used preservation methods, while digitization and microfilming were rarely used. So also is Shameenda's (2011) findings that the least used preservation practices in Zambian universities were digitization and microfilming, and this is supported by Lee et al (2002) that technological knowledge on digital elements of electronic documents is largely lacking among staff that are in preservation departments.

Major security methods emanating from the review of relevant literature which are specific to the subject matter include those identified in the assertion of Akor (2013) that: Closed Circuit Television (CCTV) and security personnel moving around in the library are among the measures in use to reduce theft and mutilation in the Benue State University Library. So also are the findings of Maidabino (2010), which identified the use of a combination of measures including electronic security systems such as alarms, surveillance cameras, etc., as capable of addressing security breaches. The libraries studied by him also used methods such as monitoring users at the circulation desk, checking identity cards allowing access, and using security guards. It could therefore be submitted that the application of information and communication technology in libraries would increase collection security, because it is obvious from the past works that the traditional manual methods of securing libraries' information resources were predominant methods in the libraries studied. Vellani (2010) summarily opines that: "early libraries were very conscious of security of their libraries as evidenced from the various security methods employed". While some of these security methods continued to be adopted in present day libraries, others have been modernised, with technological advancement opening new frontiers for preservation and security of information resources and services in the numerous academic libraries.

A large number of published literature on library security issues focuses on specific types of security breaches. Theft, mutilation and vandalism are highly covered by research articles. Issa, Aliyu, Adedeji & Rachel (2012) highlighted theft and arson as threats to collections and proposed that libraries formulate a planned security measure to protect their collections. The study by Osayande (2011) is also of relevance to this research. He indicated that the different ways in which library materials are illegally taken away from the library include out-right stealing of library books and impersonation, among many

security threats. He concluded that: “the traditional ways of manually checking patrons’ bags are both inefficient and not user-friendly” and he therefore recommended the installation of electronic security systems for effective security of library materials. Maidabino (2010) also submitted that book theft, non return of library materials and using someone else's Identification Card to borrow were among the common security threats to information resources of Malaysian academic libraries. The implication of these findings of pervious works is that they bring to the fore the ineffectiveness of manual methods of securing libraries information resources, negative attitudes of users and possibly inadequate punitive measures against defaulters; all of which could significantly affect the service delivery of the libraries, if the threats are not effectively mitigated.

Previous works on effectiveness of preservation and security methods have shown some mixed outcomes. While some literatures reviewed indicated the effectiveness of preservation and security methods used in the libraries studied, others showed that a good number of security methods were in-effective in checking loss of information resources. Amongst many examples are the findings of Ogbodo (2011) and Alhassan and Abdulsalam (2013) that revealed the effectiveness of repairs and air conditioning, which were among the most used preservation methods in the libraries studied by them. While Akor (2013) asserted that security systems applied in university libraries have not been really effective. So also is the conclusion by Osayande (2011) that the traditional ways of manually checking patrons’ bags are inefficient and not user-friendly, more-so that in most cases, bags are not allowed into the libraries studied by him.

In conclusion, the related literature reviewed provided divergent insights into the objectives, scopes and methodologies of similar studies; the theoretical framework and of course, the outcomes of such studies. However, the literature reviewed, most especially those that are specific to the study area of this research were narrow in their various scopes,

covering between one to three academic libraries in Niger State only; with focus on either preservation or security of information resources alone. This had created a gap in information on methods of preservation and security of information resources in the entire academic libraries in Niger State; and this informed the adoption of 100% coverage of the academic libraries in this research, in-order to bridge the information gap, and therefore serve as this research's contribution to knowledge.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the methods and procedures adopted in carrying out the research. The chapter is arranged under the following sub-headings: the research design adopted for the study, population of the study, sample size and sampling procedure, instruments for data collection, and procedures for data collection and analysis.

3.2 Research Design Adopted for the Study

The qualitative research method using a case study design was adopted for this study. Green and Thorogood (2009) referred to qualitative research as being characterized by its aims, which relate to understanding of social life, and its methods which (in general) generate words, rather than numbers, as data for analysis. The research design aimed to answer questions about the ‘what’, ‘how’ or ‘why’ of a phenomenon rather than ‘how many’ or ‘how much’, which are answered by quantitative methods. On the other hand, Thomas (2011) referred to case studies as analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied by one or more method. According to the author, the ‘case’ being studied may be an individual, organization, organizations, event, or action, existing at a specific time and place. This method was found appropriate for the study because the phenomena of preservation and security of information resources within academic libraries formed focus of the study. The study involved observing, recording and analysing the methods adopted by academic libraries in Niger State to preserve and secure their information resources.

3.3 Population of the Study

The population of this study consisted of 297 Library staff, comprising Professional and Para-professional those were directly or indirectly involved in the preservation and

security of information resources in twelve academic libraries in Niger State. A preliminary survey of the libraries found that there were 86 professionals and 211 paraprofessionals in the libraries as indicated in Table 3.1.

Table 3.1 Population of the Study

S/N	Tertiary Institutions in Niger State	Professional librarians	Paraprofessional librarians	Total
1.	Federal University of Technology Minna	28	71	99
2.	Ibrahim Badamasi Babangida University Lapai	13	24	37
3.	Federal Polytechnic Bida	9	17	26
4.	Niger State Polytechnic Zungeru	4	13	17
5.	Federal College of Education Kontagora	10	35	45
6.	Niger State College of Education, Minna.	5	16	21
7.	Niger State College of Agriculture, Mokwa	4	9	13
8.	Fati Lami Abubakar College for Legal and General Studies, Minna.	4	11	15
9.	Niger State School of Nursing, Bida	3	4	7
10.	Niger State School of Midwifery, Minna	2	3	5
11.	Niger State School of Health Technology, Minna	2	4	6
12.	Niger State School of Health Technology, Tungan-Magajiya	2	4	6
	Total	86	211	297

Source: Institutions' Registry Departments (2015)

In this case study, the researcher's choice of purposive selection of the sample of thirty five library staff was done systematically and rationally in such a way as to ensure that the sample included participants in all the units of the libraries such as technical services unit, system unit, and reader services unit, in order to guarantee credibility.

3.4 Sample Size and Sampling Procedure

All the academic libraries in Niger State were studied, and 35 library staff out of 297 were purposively selected for interview in a systematic and rational way. This means participants were selected from units or sections of the libraries which were responsible for preservation and security of information resources, and because they were likely to generate useful data for the research work. According to Green and Thorogood (2009), samples in qualitative research are usually purposive. Green and Thorogood (2009) indicated further that sample sizes are typically small in qualitative work, and one way of identifying how many people you need is to keep interviewing until, in analysis, nothing new comes from the data – a point called saturation. Mason (2010) also advanced reasons for sample sizes in qualitative work, that: there is a point of diminishing return to a qualitative sample - as the study goes on, more data does not necessarily lead to more information. Guest and Johnson (2006) also hold that for all qualitative researches, fifteen is the smallest acceptable sample. Charmaz (2006) suggested that twenty five participants are adequate for smaller projects; and according to Ritche, Lewis and Elam (2003) qualitative samples often lie under fifty. These arguments informed the researcher's choice of purposive selection of the sample of thirty five library staff for this study. The selection was done in such a way as to ensure that the sample included participants in all the units of the libraries such as technical services unit, system unit, and reader services unit, in order to ensure that data collection was credibly done. The distribution of the sample amongst the tertiary institutions is in Table 3.2.

Table 3.2: Sample Size

S/N	Tertiary Institutions in Niger State	Population	Sample
1.	Federal University of Technology Minna Library	99	7
2.	Ibrahim Badamasi Babangida University Lapai Library	37	4
3.	Federal Polytechnic Bida Library	26	3
4.	Niger State Polytechnic Zungeru Library	17	2
5.	Federal College of Education Kontagora Library	45	4
6.	Niger State College of Education Minna	21	3
7.	Niger State College of Agriculture, Mokwa Library	13	2
8.	Fati Lami Abubakar College for Legal and General Studies, Minna Library	15	2
9.	Niger State School of Nursing, Bida Library	7	2
10.	Niger State School of Midwifery, Minna Library	5	2
11.	Niger State School of Health Technology, Minna Library	6	2
12.	Niger State School of Health Technology, Tungan Magajiya Library	6	2
	Total	297	35

3.5 Instruments for Data Collection

Two instruments were used in collecting data for the study. These were individual interviews and participants' observations. Research instruments are tools that are employed in the collection of data in the research process. Jen (2002) explained that a research instrument is a device or tool used to collect, record or measure data which are required to provide answers to research questions or to test hypotheses.

3.5.1 Interview

Semi structured interview guide approach was used for data collection (Appendix A). This approach ensured that the same general areas of information were collected from each interviewee, and it provided more focus than the conversational approach. It allowed some degree of freedom in getting the required information from the interviewees. General interview guide approach facilitates faster interviews that can be more easily analysed and compared. The main task was to understand the methods and processes of preservation and security of information resources in academic libraries in Niger State. Interviews are generally easier for respondents, especially if what are sought are opinions or impressions. In this research, respondents were in the three sections / units of each library where the sections were well defined. The units are technical services, reader services and system units of each academic library.

3.5.2 Observation

Unstructured observations were carried out during the interview sessions. Kawulich (2005) defined observation as the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities. The focus of the unstructured observation was to understand the processes participants in the contexts observed or undertook to preserve and secure information resources in their respective libraries. This method was found appropriate and adopted for the study because the method can provide rich qualitative data. Therefore, field notes were used to collect data during the observation process (Appendix B). Field notes are the primary way of capturing the data that is collected from participant observations. Notes taken to capture this data included records of what was observed, including informal conversations with participants, records of activities and ceremonies during which the researcher was unable to question participants about their activities, and journal notes that

are kept on a daily basis. DeWalt, De Walt, and Wayland (2000) described field notes as both data and analysis, as the notes provide an accurate description of what is observed and are the product of the observation process. As they note, observations are not data unless they are recorded into field notes.

3.5.3 Validation of the Instruments

The instruments of this study were given to five experts on preservation and security of information resources from the Department of Library and Information Science, Ahmadu Bello University, Zaria and two experts from the University Library Services of Federal University of Technology, Minna to validate the contents and constructs. Corrections which were made in respect the contents were adopted and done accordingly in order to ensure the appropriateness of the instrument.

3.6 Procedure for Data Collection

The researcher visited the various libraries to interview selected professional and para-professionals that were directly responsible for preservation activities in the technical services, reader services, and system units. The interviews and participants' observation were carried out in two weeks.

3.7 Procedure of Data Analysis

Data collected were analyzed qualitatively using narrative words and descriptions, rather than by using statistical tools. The steps used in data analysis were those the outlined by Russel (2014), which included documentation, conceptualization, coding and categorization, examining relationships and displaying data and authenticating conclusions in such a way as to bring out the prevailing situation in each of the libraries.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This Chapter presented and analysed the data collected for the study. The data were analysed qualitatively, using descriptive statistics and the findings are presented and discussed. The chapter was arranged according to the following subheadings.

4.2 Response Rate

4.3 Data Analysis and Discussion

4.2 Response Rate of Respondents

Thirty library staff out of the thirty five selected for individual interviews in the academic libraries in Niger State were successfully interviewed. The inability of the researcher to interview the remaining five staff at the time of the data collection was because such staff had gone on annual or study leave. The response rate is presented in Table 4.1.

Table 4.1: Response Rate

S/N	Academic Libraries	Unit	Sample Size	Response	Percentage	Remarks
1	Federal University of Technology Minna Library	Circulation, System unit, Bindery	7	6	85.71	Federal
2	Ibrahim Badamasi Babangida University Lapai Library	Cataloguing and Classification, Computer, Bindery	4	4	100	State
3	Federal Polytechnic Bida Library	Circulation, Bindery, Computer	3	3	100	Federal
4	Niger State Polytechnic Zungeru Library	Circulation, Bindery	2	2	100	State
5	Federal College of Education Kontagora Library	Circulation, Computer Bindery	4	4	100	Federal
6	Niger State College of Education Minna	Circulation, Computer	3	3	100	State
7	Niger State College of Agriculture, Mokwa Library	Circulation	2	2	100	State
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	Circulation	2	1	50.00	State
9	Niger State School of Nursing, Bida Library	Circulation	2	1	50.00	State
10	Niger State School of Midwifery, Minna Library	Circulation, Computer	2	2	100	State
11	Niger State School of Health Technology, Minna Library	Circulation	2	1	50.00	State
12	Niger State School of Health Technology, Tungan Magajiya Library	Circulation	2	1	50.00	State
			35	30		

Table 4.1 indicated the various response rates of interviewees in the academic libraries studied. The variation in the response rates are because library staff population and the number of units or sections charged with preservation and security activities varied among the libraries, thereby resulting in different sample sizes that focused on staff that were likely to give relevant response during the interview. Libraries of five state owned institutions and two federal owned institutions had the highest response rate of 100.00% each. These are the libraries of Ibrahim Badamasi Babangida University Lapai, Niger State Polytechnic Zungeru, Niger State College of Education Minna, Niger State College of Agriculture Mokwa, Niger State School of Midwifery Minna, Federal Polytechnic Bida, and Federal College of Education Kontagora. On the other hand Federal University of Technology Minna Library had a response rate of 6(85.71%), while the libraries of Fati Lami Abubakar College for Legal and General Studies Minna, Niger State School of Nursing Bida, Niger State School of Health Technology Minna, Niger State School of Health Technology Tungan Magajiya recorded the lowest response of 50.00% each. It can be seen clearly from Table 4.1 that the least response rates came from the state tertiary institutions that had small size libraries.

4.3 Data Presentation, Analysis and Discussion

This section presented and analysed qualitatively, the data collected in respect of the research questions raised in the study after which findings were discussed. The data analysis adopted the method suggested by Russel (2014) and the steps are as follows:

- A) Documentation – this was based on notes jotted down in the field which facilitated the reconstruction of the original comments, observations, and feelings of participants.
- B) Conceptualization - using simple observations that were interpreted directly, “pulled apart,” and then put back together more meaningfully,

- C) Coding and categorization process – this was facilitated through the use of matrix of full data set systematically arranged to answer the research question at hand
- D) Examination of relationships and data display – this allowed the researcher to move from simple description of the people and settings to explanations of why things happened.
- E) Authentication of conclusions – this involved the careful consideration of the evidence and methods on which conclusions were based.

4.3.1 Preservation and Security Policies in Academic Libraries in Niger State

The importance of preservation and security policies in safeguarding information resources in academic libraries cannot be over emphasised. It is in this regard that a research question set out to find out whether academic libraries in Niger State have these policies in place. Findings from the interviews are in Table 4.2.

Table 4.2: Availability of Preservation and Security Policies in Academic Libraries in Niger State

SN	Library	Preservation		Security	
		Available	Not Available	Available	Not Available
1	Federal University of Technology Minna Library	✓		✓	
2	Ibrahim Badamasi Babangida University Lapai Library	✓		✓	
3	Federal Polytechnic Bida Library	✓		✓	
4	Niger State Polytechnic Zungeru Library	✓		✓	
5	Federal College of Education Kontagora Library	✓		✓	
6	Niger State College of Education Minna Library	✓		✓	
7	Niger State College of Agriculture, Mokwa Library	✓		✓	
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	✓		✓	
9	Niger State School of Nursing, Bida Library	✓		✓	
10	Niger State School of Midwifery, Minna Library	✓		✓	
11	Niger State School of Health Technology, Minna Library	✓		✓	
12	Niger State School of Health Technology, Tungan Magajiya Library	✓		✓	

✓ - Available

X – Not Available

Table 4.2 shows that all the academic libraries in Niger State had preservation and security policies. It was however observed that while the libraries claimed they had policies on preservation and security, only the Federal College of Education had written policies, which were under review at the time of data collection for this case study. What obtained in most of the remaining libraries were generic institutional guidelines or student handbooks that specified the operations of such libraries and simplified notices about the dos and don'ts' of the libraries. This finding agrees with Ovwoh and Iwhihu (2010), where 90% of

respondents indicated the existence of policies on preservation, but interviews and observations revealed none.

The fact that respondents indicated the availability of preservation and security policies, which in clear term could not be cited brings to the fore, the need for good documentation of all the available policies which should be brought to the notice of all stakeholders. It is also important to carry them along in the implementation of all policies, as well as making efforts to review them periodically in order to align such policies with the evolving trends in preservation and security of libraries' information resources to serve their clients better.

The quality of good preservation and security policies depends on the contents of such policies which ensure the sustainable access of users to services provided by libraries, particularly academic libraries where research and learning are of highest priority. Therefore, the research also set to determine the contents of available preservation and security policies in academic libraries in Niger State. Findings of the interviews are in Table 4.3.

Table 4.3: Contents of Preservation and Security Policies in Academic Libraries in Niger State

SN	Library	Policies				
		Preservation		Security		
		Preservation plan	Food & Drink Policy	Security Procedure	Loan Policy	Insurance Policy
1	Federal University of Technology Minna Library	✓	✓	✓	✓	X
2	Ibrahim Badamasi Babangida University Lapai Library	✓	✓	✓	✓	X
3	Federal Polytechnic Bida Library	✓	✓	✓	✓	X
4	Niger State Polytechnic Zungeru Library	✓	✓	✓	✓	X
5	Federal College of Education Kontagora Library	✓	✓	✓	✓	X
6	Niger State College of Education Minna	✓	✓	✓	✓	X
7	Niger State College of Agriculture, Mokwa Library	✓	✓	✓	✓	X
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	✓	✓	✓	X	X
9	Niger State School of Nursing, Bida Library	X	✓	✓	X	X
10	Niger State School of Midwifery, Minna Library	✓	✓	✓	✓	X
11	Niger State School of Health Technology, Minna Library	✓	✓	✓	✓	X
12	Niger State School of Health Technology, Tungan Magajija Library	✓	✓	✓	✓	X

✓ - Available

X – Not Available

Table 4.3 shows that all the academic libraries in Niger State had security procedure, and food and drink policies, while majority of them had preservation plans; and loan policies for preservation and security of their information resources. Only the Niger State School of Nursing Bida Library did not have a preservation plan. Further, Fati Lami Abubakar College of General and Legal Studies, and the Niger State School of Nursing Bida, did not have guidelines in place for loaning library materials, which will ensure that materials given out on loan are recovered as at when due. This is because the two libraries above do not loan out books due to the small volume of materials held by them. On the other hand, all the libraries indicated that they do not have any kind of insurance cover.

This study confirms the findings of Olatokun 2008 that more than an average number of the institutional libraries have preservation polices which have really provided direction to library staff in carrying out their collection management responsibilities, and the contents or the provisions in the preservation policies are adequately in use and adhered to.

4.3.2 Methods of Preservation of Information Resources in Academic Libraries in Niger State

The second research question set to find out the methods adopted for preserving information resources in academic libraries in Niger State. To achieve this, the interviewees were asked on five preservation activities. Their opinions are presented in Table 4.4.

Table 4.4: Methods of Preservation of Information Resources in Academic Libraries in Niger State

SN	Library	Preservation Methods				
		Repairs	Binding	Digitising	Migration	Environmental Control
1	Federal University of Technology Minna Library	✓	✓	X	X	✓
2	Ibrahim Badamasi Babangida University Lapai Library	✓	✓	X	X	✓
3	Federal Polytechnic Bida Library	✓	✓	X	X	✓
4	Niger State Polytechnic Zungeru Library	✓	✓	X	X	✓
5	Federal College of Education Kontagora Lbrary	✓	✓	X	X	✓
6	Niger State College of Education Minna	✓	✓	X	X	✓
7	Niger State College of Agriculture, Mokwa Library	✓	✓	X	X	✓
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	✓	✓	X	X	✓
9	Niger State School of Nursing, Bida Library	✓	✓	X	X	✓
10	Niger State School of Midwifery, Minna Library	✓	✓	X	X	✓
11	Niger State School of Health Technology, Minna Library	✓	✓	X	X	✓
12	Niger State School of Health Technology, Tungan Magajiya Library	✓	✓	X	X	✓

✓ - Applicable

X – Not Applicable

Table 4.4 shows that while all the academic libraries in Niger State had adopted repairs, binding and environmental control for the preservation of their information resources, none used digitisation and migration for preservation of information resources. Participants observation carried out by the researcher revealed similar steps and ways by which repairs were carried out in all the libraries, including existence of adequate and functional facilities in a good number of libraries, for minor and major repairs, binding and

environmental control, which were normally carried out in order to slow or stop further damage of materials, and to preserve such materials in a conducive condition for future use or reference purpose.

Respondents agreed that repairs and binding were routinely carried out whenever damages to library materials, especially books were noticed, while good environmental control was also regularly ensured to provide suitable conditions for conservation of libraries information resources. Depending on the library, the activities were done by the Reader Services Department, and the Bindery sections.

Physical observation of the processes in all the 12 libraries revealed that the tools/equipment used for repairs were similar and common and they include: adhesives, cello-tapes, staplers, scissors, masking tapes, stitching ropes, and needles of various sizes. Sequence of repairs is very simple and starts with the identification and collection of damaged materials followed by the actual repairs, depending on the nature of damage.

The study found that Federal University of Technology Minna Library, Ibrahim Badamasi Babangida University Lapai library, Federal Polytechnic Bida Library, Niger State Polytechnic Zungeru, Library and the Federal College of Education Kontagora Library, had functional bindery units. These libraries had adequate and functional facilities for binding, while the Bindery Unit of Niger State College of Education Minna Library was not functional due to lack of maintenance of equipment. On the other hand, the libraries of College of Agriculture Mokwa, Fati Lami Abubakar College of Legal and General Studies Minna, School of Nursing Bida, School of Midwifery Minna, School of Health Technology Minna, and School of Health Technology Tungan-Magajiya do not have bindery units, and they therefore rely on commercial outfits or sister libraries for their binding activities. It was gathered at the College of Agriculture Mokwa Library that it patronised the Bindery Unit of the Federal University of Technology Library for its binding services. The

remaining libraries indicated that they did their binding works at business centres. The frequency of binding activities by the libraries under study varies as the need arises. Responses to interviews showed that it could be on weekly, monthly or quarterly basis depending on the institution.

Furthermore, it was observed that Federal University of Technology Minna Library, Ibrahim Badamasi Babangida University Lapai library, Federal Polytechnic Bida Library, Niger State Polytechnic Zungeru Library, and Federal College of Education Kontagora Library, which all had functional Bindery Units are the most developed libraries and are incidentally the ones with the greatest need for binding of their materials, which could be because of the high usage of their information resources.

The physical observation of the Bindery Units of the five earlier mentioned tertiary institutions revealed that there are two categories of tools that are used for binding. These are the simple and major tools. The simple tools are made up of hot blocking machine, binding scissors, binding knife, binding hammer, binding brush, sewing frame, and needle; while the major tools include korde 64 machine, guillotine, offset printing machine, napping press, hardcore printing, and light table

As noted during the physical observation of binding process, the sequence of binding activities were quite similar and elaborate in nature; comprising the following steps: first is the identification, collection and setting of materials for binding, followed by pulling out from original material, then sewing, girdling, gluing, and end paper fixing; which is then followed by mulling, preparation of case, blocking of the case, and finally, casing in.

The level of environmental control varied amongst the libraries studied. In order to ensure good understanding of environmental control, interviews and observations were held. The results showed that air-conditioning, fumigation, housekeeping, protection

against water leakages, storage of materials away from sunlight, provision of fire extinguishers were used by the libraries to control their environments for effective preservation and conservation of information resources. Optimum temperature that is necessary for conservation and indeed preservation of libraries information resources can significantly be achieved through the use of air conditioners. The result of the study was encouraging because a good number of the libraries had functional air conditioners, but respondents indicated that erratic power supply coupled with the institutions inability to provide adequate alternative power for the running of the libraries had negatively affected their performance. Observations further revealed that the libraries of Niger State College of Agriculture Mokwa, Niger State School of Nursing Bida, and the Schools of Health Technology at Minna and Tungan-Magajiya respectively, did not have air-conditioning systems. This meant that the temperature of the libraries were not appropriate for good storage of information resources especially in dry seasons and the libraries were un-conducive for learning and research, while leaving the windows open exposed the information resources to dust, which made housekeeping more cumbersome.

Protection of information resources against fungal, insect and rodents attacks, are vital for effective conservation and preservation of library materials. The study revealed that the Federal University of Technology Minna Library, Ibrahim Badamasi Babangida University Lapai Library, Federal Polytechnic Bida Library, Niger State Polytechnic Zungeru Library, and Federal College of Education Kontagora Library, Niger State College of Education Minnai Library, College of Agriculture Mokwa Library and Fati Lami Abubakar College of Legal and General Studies Minna Library, fumigate their facilities periodically (two to three times every year) with the appropriate chemicals, in order to prevent deterioration of materials from various sources, particularly insects and rodents. Termites infestation were recalled by respondents in the libraries of the Federal University

of Technology Minna, and Niger State Polytechnic Zungeru; where fumigation had helped to keep the ravaging termites off their book materials and most especially old newspapers that were archived. Ironically, all the libraries that did not fumigate their libraries were the medical libraries of Niger State School of Midwifery Minna, Niger State School of Nursing Bida, and the Schools of Health Technology at Minna and Tungan-Magajiya respectively.

Other observed environmental control measures in all the libraries included good housekeeping to rid the library materials of dust and other dirt, protection against water leakages through regular maintenance of the roof and water system, protection of information resources against sunlight, prevention of fire hazards through the provision of fire extinguishers and fire alarms and location of the libraries in well drained areas that are not prone to flooding. However, closer examination of the fire extinguishers installed in Federal University of Technology Minna Library, Ibrahim Badamasi Babangida University Lapai Library, Federal Polytechnic Bida Library, Niger State Polytechnic Zungeru Library, and Federal College of Education Kontagora Library, Niger State College of Education Minna Library, Fati Lami Abubakar College for Legal and General Studies, Minna Library and Niger State School of Midwifery, Minna Library, showed that they might not have been serviced for a very long period, which meant that their functionality for reduction of damage by fire cannot be guaranteed. There was a general dissatisfaction amongst the respondents in respect of the level of funding of the libraries for upgrading and maintaining critical facilities. This, according to respondents, is responsible for the non availability or non functionality of some equipment in the affected libraries.

Result in Table 4.4 also showed that all the academic libraries have not adopted digitising and migration as preservation methods. According to respondents, this is because of lack of adequate funds for procurement of the requisite equipment and erratic power supply which is vital for the activities.

From the above findings, it could be concluded that repairs, binding and environmental control were the common methods to preservation of the information resources in the libraries studied. However, digitizing and migration, which were not adopted for preservation, are electronic based methods that are gaining recognition in the present era of technological development. The findings of this study corroborate Ogbodo's (2011) and Alhassan and Abdulsalam's (2013) findings that repairs, air conditioning and binding were among the most used preservation methods, while digitization and microfilming were never used in the libraries studied by them. The findings also agree with Shameenda's (2011) findings that the least used preservation practices in Zambian Universities were digitization and microfilming, and this, according to the author, is supported by Lee et al (2002) that technological knowledge on digital elements of electronic documents is largely lacking among staff that are in preservation departments. Considering the fact that digitization and migration were not used by the libraries under study, it could be noted that these libraries are yet to recognize the unprecedented opportunities offered by modern technology in preserving their information resources for efficient service delivery.

4.3.3 Methods of Security of Information Resources in Academic Libraries in Niger State

Information resources can only be available in libraries after acquiring, preserving, and conserving them when they are properly secured. Therefore, securing information resources for use now and in the future is one of the cardinal functions of any library. It is in this regard that the third research question set to find out the methods adopted for securing information resources in the libraries under study. Results of the interviews are in Table 4.5.

Table 4.5: Methods of Security of Information Resources in Academic Libraries in Niger State

S/N	Library	Security Methods				
		Electronic Security Systems	ID Cards Checks	Patrols	Computer Virus Protection	Passwords for Workstations
1	Federal University of Technology Minna Library	✓	✓	✓	✓	✓
2	Ibrahim Badamasi Babangida University Lapai Library	X	✓	✓	✓	✓
3	Federal Polytechnic Bida Library	✓	✓	✓	✓	✓
4	Niger State Polytechnic Zungeru Library	X	✓	✓	X	X
5	Federal College of Education Kontagora Library	X	✓	✓	✓	✓
6	Niger State College of Education Minna	X	✓	✓	✓	✓
7	Niger State College of Agriculture, Mokwa Library	X	✓	✓	X	X
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	X	✓	✓	X	X
9	Niger State School of Nursing, Bida Library	X	✓	✓	X	X
10	Niger State School of Midwifery, Minna Library	X	✓	✓	✓	✓
11	Niger State School of Health Technology, Minna Library	X	✓	✓	X	X
12	Niger State School of Health Technology, Tungan Magajiya Library	X	✓	✓	X	X

✓ - Applicable

X – Not Applicable

Table 4.5 shows that Identity Cards Checks and Patrols were adopted by all the libraries for securing their information resources. This means that manual methods of ensuring security of libraries information resources were very popular, as reflected in the adoption of Identity Cards verification at entrances and regular patrols of entire facilities by

library staff and institutions' security operatives, to reduce incidences of crime. It was observed, however, that in some instances students who did not have identity cards because of genuine reasons were allowed entrance into the libraries after other ways of verification such as cross checking of their original admission letters. Observation showed that handbags were not allowed into all the libraries studied, and this helped a lot in reducing the incidence of theft, because of the elimination of media of concealment of stolen materials. Further, it is noteworthy that the Schools of Health Technology at Minna and Tungan-Magajiya and the Niger State School of Nursing Bida are all small libraries with relatively small collections that can easily be monitored from the front desk without any elaborate patrol.

Similarly, the libraries of Federal University of Technology, Minna, Ibrahim Badamasi University, Lapai, the Federal Polytechnic, Bida, Federal College of Education, Kontagora, Niger State College of Education, Minna and the Niger State School of Midwifery, Minna, adopted Computer Virus Protection software (installed antivirus software sighted on computers were Norton and Kaspersky) and Passwords for workstations to secure their computer based information resources against numerous threats, especially from the internet and for protection against unauthorised access by users respectively.

With regards to the use of Electronic Security Systems for securing information resources, only the Federal University of Technology Minna Library and Federal Polytechnic, Bida Library adopted CCTV cameras for security of their information resources. The researcher took time to observe their operation at the monitoring server. A recall of good example of the efficacy of the CCTV cameras by respondents at the Federal University of Technology Minna Library was an episode of theft of a student's mobile phone, which was detected through playback of the video recording of the incident from

the server, which hitherto would have gone unnoticed if not for the cameras at that part of the Library. While the electronic security system at FUT Minna was functional, the system at the Federal Polytechnic Bida was significantly underutilised largely because of erratic power supply, coupled with the lack of functional standby electricity generator.

The above findings corroborate Akor (2013) in which he discovered that Closed Circuit Television (CCTV) and security personnel moving around in the library are among the measures in use to reduce the act of theft and mutilation in the Benue State University Library. It is also in line with the findings of the study on collection security issues in Malaysian academic Libraries by Maidabino (2010) in which the use of a combination of measures including electronic security systems such as alarms, surveillance cameras, etc., were identified as capable of addressing security breaches. The libraries studied by him also used methods such as monitoring users at the circulation desk, checking identity cards allowing access, and using security guards. He submitted that the application of information and communication technology in libraries would increase collection security. It is obvious from the findings of this case study that the traditional manual methods of securing libraries' information resources were predominant in the academic libraries in Niger state, because the electronic systems were limited to only surveillance cameras, which was functional in only one library as at the time of data collection. This, therefore, means that the academic libraries in Niger State are yet to embrace modern technology such as CCTV cameras, security doors and Radio Frequency Identification (RFID) in securing their information resources. This is unhealthy for the provision of effective and efficient services by the libraries to their clientele in the 21st century.

4.3.4 Security Threats to Information Resources in Academic Libraries in Niger State

The fourth research question was set to find out the security threats to information resources in the libraries under study. Result of the interviews conducted in the academic libraries are summarised in Table 4.6

Table 4.6: Security Threats to Information Resources in Academic Libraries in Niger State

SN	Library	Security Threats					
		Book Theft	Mutilation	Non Return of Library materials	Impersonation	Computer Virus Attack	Database Hacking
1	Federal University of Technology Minna Library	X	✓	✓	X	X	X
2	Ibrahim Badamasi Babangida University Lapai Library	✓	✓	✓	X	✓	X
3	Federal Polytechnic Bida Library	✓	✓	✓	✓	✓	X
4	Niger State Polytechnic Zungeru Library	X	✓	✓	X	X	X
5	Federal College of Education Kontagora Lbrary	✓	✓	✓	X	X	X
6	Niger State College of Education Minna	✓	✓	✓	✓	✓	X
7	Niger State College of Agriculture, Mokwa	✓	✓	✓	✓	X	X
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	X	✓	X	X	X	X
9	Niger State School of Nursing, Bida Library	✓	✓	✓	X	X	X
10	Niger State School of Midwifery, Minna Library	X	✓	✓	X	X	X
11	Niger State School of Health Technology,	X	✓	X	X	X	X
12	Niger State School of Health Technology, Tungan Magajiya Library	X	✓	X	X	X	X

✓ - Applicable

X – Not Applicable

Table 4.6 shows that mutilation of information resources, non return of borrowed library materials, book theft, impersonation, and computer virus attack were prevalent threats in the academic libraries in Niger State. The findings also show that database hacking was not an issue in any of the libraries, even where the libraries provide various degrees of e-library services.

Mutilation of books, which involved tearing out book pages, writing / marking of pages, folding of pages and edges of books, and staining of books with food debris as observed across the libraries by the researcher during data collection, were the most rampant threats amongst the libraries studied because all of them were affected but at varying degrees. This was followed by non return of borrowed library books in the libraries of Federal University of Technology, Minna, Ibrahim Babangida University, Lapai, Federal Polytechnic, Bida, Niger State Polytechnic, Zungeru, Federal College of Education, Kontagora, Niger State College of Education, Minna, Niger State College of Agriculture, Mokwa, Niger State School of Nursing Bida, and Niger State School of Midwifery, Minna. An in-depth examination of the issue of non return of borrowed library materials in Federal University of Technology, Minna, Federal Polytechnic Bida and Niger State Polytechnic, Zungeru, revealed that most of the defaulters were senior staff members and lecturers of the institutions. It was however, gathered that the libraries concerned had strategic ways of solving these problem, which included deduction of an amount that is five times the actual cost of the books not returned for a long time after being served notice of expiration of the due date and ultimatum on which to return or face the stipulated penalty. This, according to libraries had helped to reduce the incidence of non return of borrowed libraries materials.

Book theft was prevalent in the libraries of Ibrahim Babangida University Lapai, Federal Polytechnic Bida, Federal College of Education Kontagora, Niger State College of Education Minna, Niger State College of Agriculture Mokwa, and Niger State School of

Nursing Bida. This might have been due to the absence of electronic security systems for theft detection and the reliance mainly on manual methods. The nature and level of the thefts varied from library to library. While the threat was significant in a few libraries, it was curtailed in most of them because of the effectiveness of the methods in place to check such acts. Example of such strategy is the provision of wire mesh on windows' burglar proofs which makes it difficult to throw books out through the windows. There were strong evidences that a lot of the thefts might have been perpetrated in collaboration with some unscrupulous library staff which made it very easy for library books to be taken away without been detected. A good example is the incident of theft involving a library staff in Federal University of Technology Minna, in which encyclopaedia of library science was stolen, but through collaboration with another academic library in Enugu, the culprit was caught; and requisite disciplinary measure was taken against the staff.

Cases of impersonation were reported in the libraries of Federal Polytechnic Bida library, Niger State College of Education Minna library, and the Niger State College of Agriculture Mokwa library. Impersonation is when a student attempts to use other person's ID card or borrowing ticket to borrow books, with the intent of not returning such books and therefore putting the genuine owner of the borrowing ticket in trouble. Further. The libraries of Ibrahim Badamasi Babangida University Lapai, Federal Polytechnic Bida, and Niger State College of Education Minna were faced with the threat of computer virus attacks. An issue that needs some attention is the fact that the computers of the Ibrahim Badamasi Babangida University Lapai library are controlled by the University's Information and Communication Technology (ICT) Centre, thereby making it difficult for the Library to be fully responsible for computers that are meant for them. The vulnerability of the libraries' computers was either as a result of installation of un-licensed or obsolete antivirus software (which happens when such software is not updated regularly). This

threat had resulted in the crash of many computers in the libraries of Ibrahim Badamasi Babangida University Lapai and the Niger State College of Education Minna, with very grave consequences such as loss of valuable data which may not have been backed up.

The findings of this research question agrees with Mustapha, Usman, and Firdaus (2013) that mutilation is one of the problems facing collection development in Nigerian libraries, especially academic libraries. This is based on the fact that the researchers found out that between 2001 and 2012, circulated books, reference books and items of serials unit, were mutilated in the Library of the Kano State University of Science and Technology, Wudil. The findings of this research question further corroborates that of Osayande (2011), that the different ways in which library materials are illegally taken away from the library include out-right stealing of library books and impersonation, among many security threats. He concluded that: “the traditional ways of manually checking patrons’ bags are both inefficient and not user-friendly” and he therefore recommended the installation of electronic security systems for effective security of library materials. Maidabino (2010) also revealed that book theft, non return of library materials and using someone’s ID Card to borrow, were among the common security threats to information resources of Malaysian Academic Libraries. The implication of these findings is a reflection of the ineffectiveness of manual methods of securing libraries information resources, negative attitudes of users and possibly inadequate punitive measures against defaulters; all of which could significantly affect the service delivery of the libraries, if the threats are not effectively mitigated.

4.3.5 Effectiveness of Methods of Preservation and Security of Information Resources in Academic Libraries in Niger State

The fifth research question was aimed at establishing the effectiveness of the preservation and security methods adopted by the academic libraries in Niger State. In

order to achieve the objective of this research question, respondents were asked through interview schedule to simply indicate whether the methods are effective or not. Responses gathered from the interviews are presented in Table 4.7.

Table 4.7: Effectiveness of Preservation and Security Methods in Academic Libraries in Niger State

SN	Library	Methods						
		Preservation			Security			
		Repairs	Binding	Env Control	Patrols	ID Card Checks	Computer Virus Protection	Electronic Security Systems
1	Federal University of Technology Minna Library	✓	✓	✓	✓	✓	✓	✓
2	Ibrahim Badamasi Babangida University Lapai Library	✓	✓	✓	✓	✓	X	X
3	Federal Polytechnic Bida Library	✓	✓	✓	✓	✓	✓	X
4	Niger State Polytechnic Zungeru Library	✓	✓	✓	✓	✓	X	X
5	Federal College of Education Kontagora Lbrary	✓	✓	✓	✓	✓	✓	X
6	Niger State College of Education Minna	✓	✓	✓	✓	✓	X	X
7	Niger State College of Agriculture, Mokwa Library	✓	✓	✓	✓	✓	X	X
8	Fati Lami Abubakar College for Legal and General Studies, Minna Library	✓	✓	✓	✓	✓	X	X
9	Niger State School of Nursing, Bida Library	✓	✓	✓	✓	✓	X	X
10	Niger State School of Midwifery, Minna Library	✓	✓	✓	✓	✓	✓	X
11	Niger State School of Health Technology, Minna Library	✓	✓	✓	✓	✓	X	X
12	Niger State School of Health Technology, Tungan Magajiya Library	✓	✓	✓	✓	✓	X	X

✓ - Effective

X – Not Effective / Not Applicable

Table 4.7 shows that all the methods except computer virus protection and electronic security system were effective in the preservation and security of information resources in academic libraries in Niger state. The effectiveness of repairs was verified by

physical observation of some repaired books, which showed such books had maintained good quality. Effectiveness of environmental control approach differed amongst the libraries, because of the functionality of equipment such as air-conditioners for regulating the temperature and humidity of the libraries. Therefore, conservation of library materials were more enhanced in the libraries that had functional equipment, which were normally boosted by alternative power supply, using standby generating sets.

Regular patrolling by both staff within the libraries and by institutions' security personnel helped a great deal in curtailing crimes, particularly book theft, mutilation and other delinquent acts, while cross checking of all users' identity cards at libraries' entrances was effective in ensuring that only the authorised persons were allowed into the libraries. This had also helped in stopping impersonation by delinquent users, who could attempt to use other peoples borrowing tickets to borrow books from the libraries with the intention of not returning such books, and therefore putting the real owner of the borrowing ticket in trouble.

However, computer virus protection/internet security was effective in only the libraries of the Federal University of Technology Minna, Federal Polytechnic Bida, Federal College of Education Kontagora, and the Niger State School of Midwifery Minna. This was due to the fact that the antivirus software installed on their computers were licensed/genuine products and they were regularly updated. In a few cases, such as in the libraries of the Niger State Schools of Health Technology at Minna and Tungan-Magajiya, there were no computers, and therefore no need for antivirus software. On the other hand, only the Closed Circuit Television Cameras (CCTV) installed at strategic locations in the Federal University of Technology Minna Library were confirmed to be effective through observation of the workings of the system by the researcher at the server desk.

The findings of this research question corroborates Ogbodo's (2011) and Alhassan and Abdulsalam's (2013) findings on the effectiveness of repairs and air conditioning, which were among the most used preservation methods in the libraries studied by them. While the findings on 'cross checking users ID Cards at entrances contradicts Akor's (2013) assertion that security systems applied in university libraries have not been really effective. This further contradicts the conclusion of Osayande (2011) that the traditional ways of manually checking patrons' bags are both inefficient and not user-friendly, because in most cases, bags are not allowed into the libraries under study. However, the academic libraries need to embrace electronic security systems, in order to ensure effective security of library materials from theft, mutilation, or other forms of crimes, because the goal of every good approach to preservation and security of libraries information resources would be to lead to efficient and effective information service delivery and access in perpetuity.

Generally, the findings of this case study had shown that academic libraries in Niger State have adopted good methods for preserving and securing of information resources, but there is much disenchantment with the inadequacies in preservation and security of the libraries, especially as it affects the provision of appropriate tools, equipment and upgrading of critical infrastructure, as found out by the researcher during field observation. It becomes very pertinent therefore for the various tertiary institutions to adequately address the deficiencies in order to continue to support learning and research.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summaries and major findings of the study. Conclusion was drawn from findings of the study and recommendations put forward. This chapter also contain suggestions for further research.

5.2 Summary of the Study

This study was carried out to investigate the methods adopted for preservation and security of information resources in academic libraries in Niger State. To do this, five research questions were framed to enable effective data collection in the libraries in order to achieve the study objectives. Among the research questions raised were: what are the methods adopted by academic libraries in Niger State for preservation of their information resources? What are the methods adopted for security of information resources in academic libraries in Niger State? and what are the security threats to information resources in academic libraries in Niger State.

The related literatures reviewed provided divergent insights into the objectives, scopes and methodologies of similar studies; the theoretical frameworks, and of course the outcomes of such studies. Among the related literatures reviewed are the studies by Akor (2013), Olatokun (2008), and Abioye et al (2013), who adopted the survey research method in which the data collected were analysed quantitatively. On other hand, Ekoja etal (2012) and Alhassan et al (2013) adopted the qualitative research method, using the case study approach, which allowed the researchers to explore in-depth preservation policies and strategies of implementation in the target population. The review of these previous works helped in the choice of an appropriate methodology in-order to achieve the objectives of this study. It also gave the researcher insight into the format of presentation of the results.

Case study method was employed in the conduct of this research. The population of the study comprised of 297 library staff in the 12 academic libraries in Niger State, out of which 35 library staff were purposively selected for individual interview using an interview guide, wherein 30(85.71%) of them were actually interviewed. Unstructured observations were also carried out during the interview sessions using field notes guide for recording such observations. The interviewees were spread among the reader services and technical services units, which have responsibility for preservation and security activities in the libraries. Data collected was analyzed qualitatively using narrative words and descriptions, rather than statistical data analysis.

The findings show that, the academic libraries in Niger State have adopted good methods for preserving and securing their information resources for research and learning, which include repairs of damaged printed materials, binding, appropriate environmental control, scheduled patrols, periodic checks on users and staff, crosscheck / verification of identity cards, and configuration of computers with usernames and passwords. While written preservation policies in most academic libraries in Niger State are still non-existent.

However, the study found shortcomings in respect of availability or adequacy of some critical facility/equipment for modern day preservation and security of libraries information resources, documentation of library policies, and the complete absence of insurance policies in the academic libraries of Niger State.

5.3 Summary of Findings

Based on analysis of data collected, the following are the major findings of the study:

1. There were policies guiding the operations of the academic libraries in Niger State, and the contents of such policies included preservation, security/theft, food/drinks, and library loans, but they do not have insurance covers, even when insurance

issues were contained in available policies. Although the libraries claimed to have policies, written policy was sighted in only the Federal College of Education Kontagora library.

2. The common methods for preservation of information resources in academic libraries in Niger State included repairs, binding and environmental control, whereas digitizing and migration were not adopted for preservation.
3. The study revealed that the manual methods of securing libraries' information resources such as periodic random checks on users and staff, scheduled patrols, and checking of users IDs, were all in use by Academic libraries in Niger State. However, the electronic systems were limited to installation of antivirus software and configuration of passwords on computers of some of the libraries, while surveillance cameras were functional in only one library.
4. Book theft, mutilation of information resources, non return of borrowed library materials, impersonation, and computer virus attacks were the prevalent threats in the academic libraries in Niger State, while database hacking was not an issue in any of the libraries, even where the libraries provided various degrees of e-library services.
5. Repairs, binding, environmental control, regular patrols, and identity cards verifications were all effective in the preservation and security of information resources in academic libraries in Niger State. Computer virus protection / internet security was effective in only few academic libraries in Niger state, while Closed Circuit Television (CCTV) cameras were effective in only the Ibrahim Badamasi Babangida library of Federal University of Technology, Minna.

5.4 Conclusion

Based on the findings of this case study, it can be concluded that academic libraries in Niger State have good methods for preserving and securing information resources for research and learning. However, they paid more emphasis on printed materials, with less use of digital preservation methods and electronic security systems. It was therefore obvious that the libraries were yet to embrace the opportunities offered by technological advancement for preservation and security of their information resources. Suffice to say that the need to mitigate various threats using current technological innovations such as digitization, migration, and electronic security systems in order to stop any possible loss of materials can never be overemphasized. This will obviously enhance access by users to quality information resources for research and learning in the tertiary institutions of Niger State.

5.5 Recommendations

In the light of the findings of this study, the following recommendations are therefore made for improvement:

1. The libraries should have written policies covering all aspects of information resources preservation and security which should be brought to the notice of all stakeholders in order to make them fully aware of the policies. Furthermore, the libraries should have comprehensive insurance policies which would serve to mitigate losses that could arise from disasters.
2. There is need to upgrade and maintain facilities such as binderies, air conditioning systems, fire prevention equipment etc, as well as the introduction of digital platforms and electronic equipment for vital preservation and security activities.
3. Efforts should be made to enhance the manual methods of safeguarding libraries' materials, especially the periodic random checks on users and staff, while emphasis

should gradually shift to the electronic methods which are gaining very fast recognition in the present technological age.

4. Efforts should be made to reduce the incidence of mutilation, book theft and non-return of borrowed materials through enhanced security; while periodic repairs, replacement and or creation of electronic backups of affected information resources should be done.
5. The antivirus software and CCTV cameras should be regularly updated and upgraded respectively, in order for them to be effective.

5.6 Suggestions for Further Research

Further research would be necessary in the following areas:

- 1) Methods of digital preservation of information resources in academic libraries in Niger State, Nigeria.
- 2) Methods of electronic security of information resources in academic libraries in Niger State, Nigeria.

These would increase the knowledge on the prevailing situation in Niger State and therefore, help to encourage the libraries to shift from their present traditional methods of preservation and security of information resources to more effective and efficient technological / digital methods.

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APPENDICES

APPENDIX A

**INTERVIEW GUIDE ON METHODS OF PRESERVATION AND SECURITY OF
INFORMATION RESOURCES ADOPTED BY ACADEMIC LIBRARIES IN
NIGER STATE**

SECTION A

Demographic Information and Work History

1. Name of the Library
2. Category of Participant:
(a) Professional () (b) Paraprofessional ()
3. Job Title
4. Highest Educational Qualification of Participant:
(a) MLS () (b) BLS () (c) HND () (d) OND () (e) Others
5. Years of working experience in the present place
6. Date of interview Time

SECTION B

PRESERVATION AND SECURITY POLICIES IN ACADEMIC LIBRARIES

7. What are the Preservation and Security Policies available in the Library?
(a) Preservation plan () (b) Security procedures () (c) Food and drink policy ()
(d) Loan policy () (e) Insurance policy ()
8. Why do you adopt the policies?
9. What steps do you take to formulate policies for preserving and securing your Information Resources?

SECTION C

METHODS ADOPTED FOR PRESERVATION OF INFORMATION RESOURCES IN ACADEMIC LIBRARIES

10. What are the ways you take to preserve Information Resources in your library?
(a) Repairs () (b) Binding () (c) Environmental Control () (d) Digitizing ()
(e) Migration ()
11. Why do you adopt the way?
12. What steps do you take to preserve your Information Resources?
13. What tools do you use in preserving your Information Resources?

SECTION D

METHODS ADOPTED FOR THE SECURITY OF INFORMATION RESOURCES IN ACADEMIC LIBRARIES

14. What are the ways you take to secure Information resources in your library?
(a) Use of electronic systems () (b) Verification of identity cards () (c) Regular
Patrols () (d) Installation of Antivirus /Internet security software () (e) Passwords
for accessing computer workstations ()
15. Why do you adopt the way?
16. What steps do you take to secure your Information Resources?
17. What tools do you use in securing your Information Resources?

SECTION E

SECURITY THREATS TO INFORMATION RESOURCES IN ACADEMIC LIBRARIES

18. What are the security threats to Information resources in your library?
(a) Book theft () (b) Mutilation of books () (c) Non return of library materials ()
(d) Impersonation () (e) Computer Virus Attacks () (f) Hacking of Library
Database ()
19. What steps do you take to identify the security threats to your Information
Resources?
20. What tools do you use in identifying the security threats to your Information
Resources?

SECTION F

EFFECTIVENESS OF METHODS OF PRESERVATION AND SECURITY OF INFORMATION RESOURCES ADOPTED BY ACADEMIC LIBRARIES

21. Which of the Preservation and Security Methods Adopted by Your Library are Effective?
(a) Repairs () (b) Digitising () (c) Environmental Control () (d) Regular patrols ()
(e) Installation of Antivirus /Internet security software () (f) Use of electronic systems
22. Why are the methods adopted effective or not?
23. What steps do you take to enhance effectiveness of the methods adopted?

APPENDIX B

FIELD NOTES GUIDE FOR RECORDING OBSERVATIONS DURING RESEARCH ON METHODS TO PRESERVATION AND SECURITY OF INFORMATION RESOURCES ADOPTED BY ACADEMIC LIBRARIES IN NIGER STATE

SECTION A

Background Information on the Respondents

- 1. Name of place.....
- 2. Date of recording..... Time.....
- 3. Participants.....
- 4. Type of data collection event.....
- 5. Physical place.....
- 6. Staff involved.....
- 7. Activities carried out:

S/N	Type of Activity	Frequency	Duration
1.			
2.			
3.			
4.			

- 8. Object: the physical things which are present
.....
.....
- 9. Act: single action that staff do.....
- 10. Event: a set of related activities that people carry out.....
- 11. Time: the sequencing that takes place over time.....
- 12. Goal: the things people are trying to accomplish.....
- 13. Feelings: the emotions felt and expressed.....