Disaster Management and Library Security in Academic Libraries in North-East Geopolitical Zone, Nigeria

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Abstract: *The study examined disaster management and library security in academic libraries in North-East Geopolitical Zone, Nigeria. Libraries have remained the incontrovertible seats of wisdom, and the basis for cultural continuity and knowledge dissemination. The endemic damages by disasters in libraries, whenever any of them strikes, leave the affected library in a deplorable condition. No matter how the threats appear, or how they influence academic libraries, the ability to safeguard and preserve their collections should be uppermost in their policies. The study was carried out in Borno, Yobe, Bauchi, Adamawa, Gombe and Taraba States. In this study, the population comprises of 564 library personnel of all 6 federal and 5 state universities in North East Zone, Nigeria. These libraries are Abubakar Tafawa Balewa University Library, Bauchi, Ramat Library, University of Maiduguri (UNIMAID), Ibrahim Babangida Library, Adam University of Technology (MAUTECH), Yola, University Library, Federal University Gashua (FUG); University Library, Federal University Wukari, Taraba State (FUW) University Library, Federal University Kashere, Gombe State (FUK); Taraba State University Library (TASU); University Library, Bauchi State University, Gadua (BASU); Abdulrahaman Gaji Library Adamawa State (ADSU), Mubi, Gombe State University (GOSU) Library, Gombe, and Goodluck Jonathan Library Yobe State University (YSU), Damaturu and Borno State University Library (BOSU), Maiduguri. The finding revealed that substantial number of the librarians were aware of the technologies used in disaster management in University libraries.*

Key words: *Disaster management, disaster prevention, disaster plan*

Introduction

The remarkable escalation and the tremendous damages caused by disasters in recent time have become a cause for the global concern. Over the past decade, the number of natural and human induced disasters has persistently increased and had significantly inflicted agony and injury on their victims. The volatility of their occurrences, how they occur and which one occurs, first has been a great concern to individuals and organizations globally (Ayoung, Boatbil&Baada, 2015). Disasters are situations whereby environmental phenomena or armed conflicts produce stress, personal injury, physical damages or economic disruption of great magnitude. They are regarded as an overwhelming ecological disruption, occurring usually on a large scale.

The erratic hits of disasters in different segments of the society have not exempted libraries, especially academic libraries where a great amount of national wealth is stocked. In a world of copious digital technologies, academic libraries have enough shares of disasters. Library disaster has to do with any event that directly or indirectly affects its smooth administration by disrupting its normal services to its users (Igbokwe, 2009). It is an unexpected event which puts library resources or collections at risk. According to Arklay (2015), disaster occurs in a library when any event causes a sudden removal of records and documents from accessibility and use. He

further argues that libraries are very prone to disasters. Man-made disasters include armed conflicts, wars, terrorism and fire while natural disasters encompass floods, hurricanes, earthquakes etc.

Libraries have remained the incontrovertible seats of wisdom, and the basis for cultural continuity and knowledge dissemination. The endemic damages by disasters in libraries, whenever any of them strikes, leave the affected library in a deplorable condition. No matter how the threats appear, or how they influence academic libraries, the ability to safeguard and preserve their collections should be uppermost in their policies. The key to achieving this goal lies in conservative management that enables long-term planning and reasonable decision making (Idiegbeyan-Ose, Izuagbe, Ifijeh, Ilogho, Iwu-James & Osinulu, 2018).

Disaster management encompasses all management issues necessary to deal with incidents that threaten library buildings, collections, services and human lives. Since academic libraries of today are technology-driven, many nascent disasters are evolving. For instance, changes in energy systems and lack of electricity supply endanger traditional library materials, just as digital materials are useless without energy supply. No university library is immune to these disasters; depicting that any of them could befall any university library any moment since it is totally inescapable without appropriate control measures.

It is stating the obvious that academic libraries in Nigeria are poorly funded. These libraries depend solely on government grants for their survival and development. In the face of poor funding and uneven development of academic libraries across the six geo-political zones in Nigeria, disasters both natural and man-made appear to be another major threat to the existence of these libraries. In almost all the academic libraries in North-Eastern Nigeria, there have been reported cases of mutilated and stolen books by delinquent users and also cases of volumes of books being damaged by rainfall (Gupta, Starr, Farahani & Matinrad, 2016).

STATEMENT OF THE PROBLEM

Academic libraries are referred to as the heart or nerve centers of the institutions. Materials in the academic libraries are vulnerable to disaster of various kinds, such as fire, flood, pests' destructions, windstorm, computer viruses etc. They usually leave in their trail very unpleasant experiences. Effective disaster preparedness in these academic libraries is necessary. The disaster management preparedness would safeguard the institutions from losing their library materials, as the effect of not having disaster management measures in academic libraries would cause them to lose their materials when disaster strikes.

The academic libraries in North Eastern Nigeria appear to be facing many problems such as disasters especially attacks from these rebellious Boko Haram insurgents whereby their valuable materials are at risk if necessary steps are not taken. When disaster or threats of disasters in the libraries are not manage properly, there is that tendency of losing library materials, personnel and the entire library buildings, and making the higher institutions' effort of stocking their libraries with resources that support their academic programmes ineffective. Similarly, there is no sufficient empirical study on disaster management in academic libraries in North Eastern states in Nigeria. The available ones such as (Ilo, Ngwuchukwu, Michael-Onuoha & Segun-Adeniran 2019; Kaushik & Kumar, 2013; Lovecy, 2005; Ogunniyi & Adejubee, 2014) do not cover sufficient scope or use robust method of data collection and analysis. Therefore, this study intends to expand the scope to cover the academic libraries in the North Eastern Nigeria and

adopt more robust method of data collection and analysis to enhance the reliability and authenticity of the results and findings of the study.

Objectives of the study
The primary objective of this study is to determine disaster management and library security in academic libraries in North Eastern Nigeria. Specifically, the study is set to achieving the following:
(1) To identify the nature of disasters that has affected academic libraries in North Eastern Nigeria.
(2) To determine the extent of damage from disasters in academic libraries in North Eastern Nigeria.
(3) To ascertain the disaster management plan academic libraries used

LITERATURE REVIEW
Academic libraries are libraries that are attached to post-secondary institutions. They are therefore as varied and distinctive as the institutions which they serve such as universities, polytechnics and colleges. Their main purpose is to support the objectives of their parent institutions, in the areas of teaching, learning and research (Abdulrazaq, 2016). The users of these academic libraries are students, lecturers, support staff (non-teaching staff) and the local community in which the institution is located. This library is regarded as the heart of the intellectual system of the institution. The quality of academic institution like the university is measured by the services provided by the library because of its unique position in the overall university system.

Academic libraries assist by acquiring, preserving and disseminating information resources that would satisfy the needs of both present and future users (Maidabino& Zainab 2011).It is a centralized location where new and emerging information technologies can be combined with knowledge resources in a user-focused, services-rich environment that supports today's social and educational patterns of learning, teaching and research. Library services can only be achieved through the availability of library collections. Maidabino and Zainab (2011) stated that academic library managers are expected to acquire, preserve and disseminate information resources that would satisfy the needs of both present and future users. Mohammed (2013) in support said these materials must be rich to feed the students, teachers and researchers in meeting their day-to-day needs related to study and research and to supplement the classroom teaching. He said academic libraries especially university libraries, acquired expensive collections such as computers as well as introduced internet services that would supplement teaching, learning and research projects of their users. That is to say, academic libraries are charged with the responsibility of selecting, preserving, and making available quality information materials to their users in various forms. Nwokedi, Panle, and Samuel (2017) noted that academic libraries are competing globally to provide access to these information resources to enhance productivity and to deliver service quickly. It also to makes it possible to communicate and collaborate with colleagues, students anytime and anywhere, because this new technology through the internet have even changed the way information is stored, accessed and shared. Academic libraries have open access resources with the benefit of:

i.   Increased staff productivity by enabling them to be flexible, make better decisions and response quickly to the changing demands of the academic environment by providing secure access to the information they need anywhere anytime.

ii.   Increased students' academic performance to be able to face challenges of the wider society. The best disaster preparation for electronic and magnetic media is to back up the data contained on these media.

Backups depend on the local hardware and software configurations. With electronic media it is crucial that you be prepared for a failure; the question is not if it will happen, but when it will happen (Verzosa, 2012).These information materials are maximizingly used by the users of these libraries for this reason there should need to safeguard them from destructive agents such as disasters. Agboola (2000) opined that a university library is an important component of our university institution. He emphasized that no university can lay claim to academic excellence

The Concept of Disaster
The concept of disaster is seen differently by different authors. For example Senyah and Lamptey (2011) sees disaster as an unexpected event which puts people and materials at risk, damage buildings, destroy the information infrastructure, disrupt services and render documentary materials inaccessible to users. Ahenkorah-Marfo and Borteye (2010) on other hand defined disaster as a common phenomenon that can and will happen when least expected. Ahenkorah-Marfo and Borteye emphasized that disaster often comes unannounced and uninvited with disastrous consequences.

From the above definitions disaster has become endemic in the society because every day there is news of one form of disaster or the other. Disasters are so numerous and they differ from country to country and from library to library. These disasters can be natural or man-made which include flood, fire, hurricane, earthquake, tsunami, volcanic eruption, windstorm, wars, water leakage roof leakage, pest, insects etc (Azigba & Edet, 2009). Natural Disasters are natural occurrences in the environment without human influence that can or have caused a lot of financial losses, risks, hazards and suffering to libraries, humanity and the environment at large. This is because Natural disasters are uniformed, unavoidable, more dangerous and destructive (Adedeji, Odufuwa & Adebayo,2012). They emphasized that natural disasters are often frightening and difficult to understand, because we have no control on when and where they happen but we can only control them through how we prepared as communities and governments to deal with the dangers that natural disasters bring.

The flooding of the Arno River in November 1966 damaged 1,200,000 volumes of books and pamphlets in the Bibliotheca Nazionale Centrale in Italy (Amaraegbu, 2011). He noted that Cape Town in South Africa also experienced flooding which hit rural communities in Kwazulu-Natal and the Eastern Cape. Also mentioned is the Mozambique flooding which he mentioned that U.S figures estimated people killed and so many thousands displaced. This floods they said was as a result of a week-long torrential rains in South Africa. Flooding which destroyed Zimbabwe, swelled the Limpopo River forcing an orange alert on January 12, 2013 when the toll began (AFP Reporter, 2013). The AFP Reporter said that other towns remain submerged, with thousands of homes destroyed and key services such as banks, shops, schools and hospitals seriously damaged. The AFP Reporter expressed further that Thousands of Australians huddled in shelters on Tuesday 28 of January, 2013 as a result of torrential rains   which flooded cities

and towns in the northeast, killing four people and prompting around1,000 helicopter evacuations.

The university of Ibadan alone suffered a lot of damages from flood running to over N10 billion, this include the washing away of its fish farm valued at about N300 million, the zoological garden where a lot of animals were killed, and the destruction of books estimated at about N2 billion (Onwubiko, 2012).Fire disaster is accompanied by water damage as in every fire outbreaks water is used with the intention of putting off the fire, but ends up soaking books and causing serious damage to them. Fire outbreak in a library may destroy all or parts of the collections. It may also claim lives or threatens the safety of staff (Senyah and Lamptey, 2011). Asuzu (2000) cited Goetz and Schmeltzer who lamented the damages done to libraries in the United States of America between 1911 and 1961 to a minimum of 350 libraries and a total books and equipment worth as $15,143,314. Asuzu pointed that fire in the library is as old as the history of library itself. He said even the ancient library of Alexandria was engulfed by fire thrice.

Disaster Management

Disaster management assists in determining the likelihood of hazards and lessening the consequences of risks to library materials. Disaster management aims at looking at the precautions by which disasters can be prevented or minimized. Archives, libraries and museums should take measures to prevent disasters. It also encompasses all aspects of planning for and responding to disasters, including hazard analysis, vulnerability reduction (preparedness), prevention, mitigation, response, recovery and rehabilitation. It may refer to the management of both the risks and the consequences of disasters. According to Isa (2012) disaster management aims to reduce, or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery. These would include activities such as arranging insurance assessment, drying or treating materials, offering counseling to staff, providing a temporary service, and returning storage areas and services to normal. Despite the fact that not all disasters can be prevented, one can prepare for and also know how to react to them in order to minimize their effect. 'Disaster management' is a term commonly used in libraries and also understood by archivists'

METHODOLOGY
Design of the Study
This study adopted descriptive survey research design. According to Bansal (2015) descriptive survey describes a current situation with a subject. It involves collecting data in order to answer questions concerning conditions or relationship that exist, practices that prevail, points of views, or attitudes that are held, effects that are being felt or trends that are developing and reports the way things are. The choice of this design is relevant and suitable as the study investigated disaster management in academic libraries. The study involves collecting data and answering questions on the views and opinions of librarians and library officers as respondents on disaster in academic libraries and reporting the way things are.

Area of the Study
Area of the study is North Eastern Nigeria. This region is one of the six geopolitical zones of the Federal Republic of Nigeria.

Population of the Study
In this study, the population comprises of 564 library personnel of all 6 federal and 5 state Universities in North East Zone, Nigeria. These libraries are Abubakar Tafawa Balewa University Library, Bauchi, Ramat Library, University of Maiduguri (UNIMAID), Ibrahim Babangida Library, Adam University of Technology (MAUTECH), Yola, University Library, Federal University Gashua (FUG); University Library, Federal University Wukari, Taraba State (FUW) University Library, Federal University Kashere, Gombe State (FUK); Taraba State University Library (TASU); University Library, Bauchi State University, Gadua (BASU); Abdulrahaman Gaji Library Adamawa State (ADSU), Mubi, Gombe State University (GOSU) Library, Gombe, and Good luck Jonathan Library Yobe State University (YSU), Damaturu and Borno State University Library (BOSU), Maiduguri.

All library personnel will be used for the study since the population is not large. They are shown in Table 1 below:

S/No	University	Year of Establishment	Library Personnel
1	UNIMAID	1975	137
2	ATBU, BAUCHI	1981	49
3	MAUTECH, YOLA	1998	34
4	FUW, WUKARI	2011	33
5	FUG, GASHUA	2014	19
6	FUK, KASHERE	2010	34
7	ADSU, ADAMAWA	2002	47
8	GOSU, GOMBE	2004	73
9	YSU, DAMATURU	2006	52
10	TASU, JALINGO	2008	14
11	BASU GADAU	2010	47
12	BORNO STATE UNIVERSITY	2019	5
	TOTAL		564

Source: University Library Management (2021)

The sample of this study consists of 100% of all library personnel drawn from 6 Federal and six state universities in north eastern Nigeria. All personnel will be part of the study since the population is not large. Busha and Harter (1980) were of the opinion that the entire population can be studied if the researcher can manage it.

Table 2: Distribution of University Library Personnel

S/N	University	Professional staff	Para-Professionals	Others
1	UNIMAID	41	71	25
2	MAUTECH	10	11	13
3	ATBU	24	16	29
4	FUG	11	2	6
5	FUW	12	3	18
6	FUK	13	5	16
7	TASU	5	4	5
8	BASU	14	14	19
9	ADSU	7	28	12
10	GOSA	15	16	42
11	YSU	14	32	6
12	BOSU	2	6	3
	Total	**168**	**208**	**194**

3.6 Method of Data Collection

The research instrument will be administered personally to the librarians and library officers in the entire academic libraries in North Eastern Nigeria. This was be carried out by the researched the three trained research assistants. The assistants was selected from the three senatorial zones of the state. Each will do the administration in his/her respective zone. These research assistants will be briefed by the researcher on how to administer and collect the questionnaires preferably on the spot in the case of maintaining a high rate of return.

3.7 Method of Data Analysis

The researcher analyzed and interpreted the responses using frequency, mean and standard deviation. These will be presented in such a way that answers to each research question could be obtained. For the responses, they will be based on a four point rating scale to determine mean scores of respondents on disaster management in academic libraries. On this four point rating scale, the cut-off point will be obtained by adding the values of the ratings by the respondents. The means will be computed from the sum of the value points and divided by the number of the responses. The formula used in calculating the means will be

$x = \Sigma x/n$

Where:

X= mean

x = value

N= number of responses

Σx= sum of values

Table 3

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Satellite communication networks	227	1.00	4.00	1.4868	.99535
Geographic information system (GIS)	227	1.00	4.00	1.7571	1.00701
Global positioning system (GPS)	227	1.00	4.00	1.5660	.99496
Forecasting and warning system	227	1.00	4.00	3.6506	.94933
Close circuit television (CCTV) system	227	1.00	4.00	2.7323	.89475
Photo electric detector	227	1.00	4.00	1.7372	.87917
Fire suppressants	227	1.00	4.00	2.6025	.92319
Global integrated observing system	227	1.00	4.00	3.7493	.92638
Space-based technology	227	1.00	4.00	2.6854	.90082
Remote sensing	227	1.00	4.00	1.9719	.94577
Valid N (listwise)	227				

Table 4
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Fire extinguisher	227	1.00	4.00	4.0068	.99535
Carbon dioxide system	227	1.00	4.00	3.7571	1.00701
De-humification	227	1.00	4.00	1.0660	.99496
Automatic sprinkler system	227	1.00	4.00	2.1106	.94933
Vacuum freezer dryer	227	1.00	4.00	3.1023	.89475
High expansion foam	227	1.00	4.00	1.0172	.87917
A bulldoze fire extinguisher	227	1.00	4.00	3.8825	.92319
Halon BC dry, Dry chemical	227	1.00	4.00	1.0993	.92638
Fire suppressant	227	1.00	4.00	3.7754	.90082
Valid N (listwise)	227				

Discussion of findings

The finding revealed that substantial number of the librarians were aware of the technologies used in disaster management in University libraries, they included satellite communication networks, global information system, global positioning system, forecasting and warning system, close circuit television system, metal detector, fire extinguisher, photoelectric detectors, fire suppressant, thermal detectors, automatic sprinkler system, remote sensing, carbon dioxide system. However, very few number (57.s3%) of the librarians were unaware of the technologies used in disaster management. This finding align with the findings of Odaro (2014) which revealed that academic libraries have suffered adversely from security issues in the libraries and the adoption of electronic security systems devices would drastically improve the situation.

On the other hand, academic librarians' awareness of modern technologies used in disaster management in libraries in North East was not independent on gender. On the contrary, librarians' awareness of modern technologies used in disaster management in libraries in North East was dependent on years of working experience. This was evident from the analysis conducted. This findings supports that of Adamu and Abdullahi (2018) who reiterated that insurgence posed a serious threat to the library, its users, staff and the collections; while manual security systems is not enough to curtail the nefarious acts of insurgence; and using ICT security systems in checkmating any criminal activities is the best method in this age of globalization. This could be due to the enormous necessity of modern technologies in disaster management in libraries in North- East, Nigeria. These could be due to the fact that academic libraries have suffered adversely from security issues and other anti-social menace and that the adoption of electronic security systems devices would drastically improve the current unappealing situation

Librarian agreed to the types of modern technologies adoption for management disaster of water and windstorm related disasters is based on gender. The finding showed that librarians agree to adoption of modern technologies for management of water and windstorms related disasters in libraries in North-East Nigeria.

Conclusion

The awareness and adoption of modern technologies in federal university libraries in North east Nigeria is a sine qua non to efficient library service delivery and disaster management. The study concluded that majority of academic librarians indicated they are aware of the use of modern technologies such as satellite communication networks, global information system, global positioning system, forecasting and warning system, close circuit television system, metal detector, fire extinguisher, photoelectric detectors, fire suppressant, thermal detectors, automatic sprinkler system, remote sensing, carbon dioxide system, halon BC dry, dry chemical, automated carbon dioxide and De-humification in managing disaster in North east Nigeria.

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