
**Abstract:** The study examined the challenges of digitalizing institutional libraries in Nigeria’s North-East region with reference to four selected Federal Polytechnic libraries in the region. It was conducted with the use of quantitative method of data collection. The study identified the challenges bedeviling the digitalization of institutional libraries and investigated the current nature of institutional libraries in four selected Federal Polytechnics in North-East Nigeria. The study found that, inadequate fund, lack of political will and expertise are some of the challenges bedeviling the digitalization of institutional libraries in North-East Nigeria. It also found that the current nature of institutional libraries in the region is traditional. The study recommended that, adequate fund, retraining of library professional and more commitment from the part of political leaders are necessary for digitalizing institutional libraries in Nigeria’s North-East region.

**Keywords:** Challenges, Digitalization, Institutional, Libraries, Polytechnic, North-East, Nigeria.

**INTRODUCTION**

The library is one of the functional organs of higher institutions charged with the responsibility of collecting, processing, organizing, disseminating and securing all sources of information (print and non-print) to meet the needs of all members of the academic community (staff, students and researchers) (Omeluzor, *et al.*, 2017). The academic libraries as it is called developed strategies and programs towards meeting the informational needs of it community to enhance teaching, learning and research activities of the academic community (Madukoma, *et al.*, 2013). Considering the continuous growth in library collections and technological advancement in information handling, retrieval and use, there is the need to give adequate attention to the digitalization of institutional libraries (Manuwa *et al.*, 2018). The quest for digitalization of institutional libraries is high among tertiary institutions in Nigeria’s North-East region. Library professionals and users over the years have admitted the need for digitalization as a shift away from the age long traditional library method. Storage and security of information as well as easy accessibility are well guaranteed by digital library system. Digital library system create opportunity for library professionals deliver service to users without much stress.

The users of institutional libraries are made up of students, staff, and researchers who may not have any skill or knowledge on how to utilize the digital library facilities (Maduako, 2013). Thus, proper retraining of library professionals is a basic necessity for the development of digital libraries in higher institutions of learning (Bleidt, 2011). Without retraining, it may be difficult for the users to identify, locate, access, or find their way in the library if digital system is developed (Ali, 2012). The library provides not only the information resources but also conducive environment for the use of the resources for their reading, reference, and consultation in the attempt to find what others have done in similar subject area and what is going on in researches and on the same subject of interest to readers (Esse, 2014). This is done by library in the provision of services either with the traditional strategies and or in combination with the application of modern technology popularly known as digital library to enable readers to have ease of access via network using computers and other tools (Arms, 1999). The current pace of technological advancement has made the demand for traditional library system obsolete (Oakleaf, 2011). Users aspirations are to access information and use same in a more modern form thus, making electronic method or digital library more prefer to traditional library system.
PROBLEM STATEMENT

Fund, expertise, political will and commitment, retraining of library professionals are part of the requirements for the development of digital library system. Studies by Arms (2000) and Leiner (1998) have examined digital library in meaning than on how to developed the system. This has created some knowledge in the area of concept without providing awareness on system improvement and necessary upgrade of facilities aim at digitalizing libraries. Ali (2012) studied the importance of digital library but failed in his analysis to contribute some knowledge on how to developed digital library system. Bleidt (2011) provided little requirements for the development of digital library system. He recommended retraining of library professionals as a requirement for the development of digital library. Manuwa et al., (2018) and Esse (2014) examined library in meaning affiliated with digital library development but have not in any way provided explanations on the development of the digital library system. Omeluzor et al., (2017) in their analysis failed to point out challenges bedeviling the development of digital library system but gave some insights into its importance. These have created some gaps in knowledge in the area of challenges facing the development of digital libraries in institutional libraries in North-East Nigeria. It is in order to bridge up some of these identified research gaps that the study is necessitated.

Objectives of the Study

The objectives of the study are:
1. To identify the challenges bedeviling the digitalization of institutional libraries in four selected Federal Polytechnics in Nigeria’s North-East region.
2. Access the current nature of institutional libraries in North-East Nigeria.
3. Access the level of preparedness for developing digital library system among institutions in Nigeria’s North-East region.

Research Questions

The research questions include:
1. What are the challenges bedeviling the digitalization of institutional libraries in Nigeria’s North-East region?
2. What is the current nature of institutional libraries in North-East Nigeria?
3. What is the level of preparedness for developing digital library system among institutions in Nigeria’s North-East region?

LITERATURE REVIEW

The field of digital library is truly a burgeoning one therefore, the position that a functional definition would add clarity to it as stated by several scholars hold water tight (Okoye, 2013). A functional definition will in no doubt assist when trying to evaluate resources as students’ perspective will provides a new look at the problem of defining digital library (Arms, 2000). Digital library deals with collecting, cataloging and providing access to information for users online via catalog records (Wickramanayake, 2014). Handled like traditional library in terms of documentation and standard process, documentation in digital form is the basis of digital library (Seadle & Greifenederv, 2007). It is an electronic product or software with both primary and manually created or proofed data defines the concept of digital library. It deals with cataloging, long term archiving and accessibility to users (IMLS, 2005). A digital library is the electronic provision of digital documents in connection with online services, building on the tasks of a traditional library, which enables worldwide access to its collection via the internet (ARL, 1995). Digital library is a monitored information collected with related services and stored in a digital manner to be accessible through a network. The development of digital library system in institutional libraries in Nigeria’s North-East region implies investment in the area of networking institutional libraries in the region to be able to coup up with the demand of electronically stored information.

Resources that fundamentally reconstructs the services of traditional library and intellectual substance in digital form is a digital library. Interconnections and software are part of the digital contents that make up a digital library. Digital library in any meaningful sense is probably not a single, simple and stand-alone web page as more than a single page or even a single book library is not digital but traditional in meaning. Traditional libraries are not replaced by digital libraries but rather, they are developed into digital libraries in future. Most transformed aspect of several libraries with print-based features existing today were initially medieval manuscripts libraries (NSF, 1999). Technology is needed to link up the resources of several services to the end users due to their transparent nature. And, this is necessary because digital library is not a single entity. Accessibility to information services and digital libraries id a global goal. Document surrogates are not the only components of digital library collections. Unrepresented digital artefacts or those which cannot be distributed in printed formats are also part of digital library collections (ARL, 1995). Some objects support users in dealing with available information directly or indirectly through the use of electronic or digital means. The collection of such services and information objects is digital library (Leiner, 1998).

Resources that fundamentally reconstructs the services of traditional library and intellectual substance in digital form is a digital library. Interconnections and software are part of the digital contents that make up a digital library (Hindagolla, 2012). Digital library in any meaningful sense is probably not a single, simple and stand-alone web page as more than a single page or even a single book library is not digital but traditional in meaning. Traditional libraries are not replaced by
digital libraries but rather, they are developed into digital libraries in future (Goldman et al., 2016). Most transformed aspect of several libraries with print-based features existing today were initially medieval manuscripts libraries. And, considering the requirements that make up a digital library, it is apparent that institutional libraries especially those of Federal Polytechnics in North-East Nigeria are not digital libraries.

**METHODOLOGY**

The study is a survey carried out on four selected Federal Polytechnics in North-East Nigeria. It covers a period of five years (2017-2022). It was conducted with the use of quantitative method of data collection. Primary data were sourced through the administration of closed ended questionnaire administered on sample drawn from the population of the study. Library professionals working in the libraries of Federal Polytechnics Damaturu, Yobe State, Mubi in Adamawa State, Bauchi in Bauchi State and Bali in Taraba State formed the population of the study. Designed instrument of data collection was administered on 300 respondents chosen among library professionals and users in the four selected institutions using the probability sampling technique in which the stratified method was adopted for the selection. Each of the Polytechnic is represented by 75 respondents i.e. 25 library science professionals (Librarians), 25 library users (students’) and 25 non-library professionals but working in the Polytechnics libraries (Staff). The sample for the study was determined using the Rao Software. And, the questionnaire was administered in each of the study area (institution) separately at different time. All the questionnaires administered were retrieved by the researcher. In the administration of questionnaire, no research assistant was used.

Data collected were analyzed using the Statistical Package for Social Science (SPSS) software. A combination of frequency/percentage (%), mean/average (m/a) and standard deviation (Sd) were adopted in the analysis of data. Variables like Strongly Disagreed (SD), Disagreed (D), Neutral (N), Agreed (A) and Strongly Agreed (SA) were also employed in the organization of responses in the analysis part of the study with Q standing for question.

**Data Presentation and Analysis**

<table>
<thead>
<tr>
<th>Questions</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>M</th>
<th>F/P</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Inadequate fund does not affect the digitalization of Polytechnic libraries in North-East Nigeria from 2017-2022.</td>
<td>175</td>
<td>65</td>
<td>20</td>
<td>25</td>
<td>15</td>
<td>60</td>
<td>3,620</td>
<td></td>
</tr>
<tr>
<td>Q2. Lack of political will on the part of leaders bedeviled the efforts toward digitalization of Polytechnic libraries in Nigeria’s North-East region from 2017-</td>
<td>25</td>
<td>45</td>
<td>15</td>
<td>80</td>
<td>135</td>
<td>60</td>
<td>1,900</td>
<td></td>
</tr>
</tbody>
</table>
Table 1 shows that 58.33% of the respondents strongly disagreed with the view that, inadequate fund does not affect the digitalization of Polytechnic libraries in North-East Nigeria from 2017-2022, 21.67% disagreed, 6.67% were neutral, 8.33% agreed and only 5% of them strongly agreed with the view. Also, on the position that, lack of political will on the part of leaders bedeviled the efforts toward digitalization of Polytechnic libraries in North-East Nigeria from 2017-2022, 8.33% of them strongly disagreed with the position, 15% disagreed with it, only 5% remained neutral while 26.67% disagreed and 45% strongly agreed with it. Table 2 clearly indicated that, the assertion that, Library Science Professionals do not need to be retrained for digitalization of the Polytechnic libraries to be done in Nigeria’s North-East region was strongly disagreed with by 50% of the respondents, 20% disagreed, 10% were neutral, 11.67% agreed while 8.33% strongly agreed with it. The view that, Nigeria’s lack of technological advancement affects the digitalization of the Polytechnic libraries in North-East Nigeria was strongly disagreed with by only 5% of the respondents, 6.67% disagreed, 8.33% remained neutral, 30% agreed and 50% of them strongly agreed with the view. Table 2 again shows that, 50% of the respondents strongly disagreed with the position that, multi-sectorial efforts are not necessary as contribution to digitalizing the Polytechnic libraries in North-East Nigeria, 25% disagreed, 11.67% were neutral while 8.33% agreed and only 5% of them strongly agreed with the position. Q1, Q2, Q3, Q4 and Q5 all recorded equal mean (M) score of 60 while Q1 has the highest SD score of 3,620 and Q2 has the lowest SD score of 1.900. The SD scores for Q3 is 2,170, Q4 is 2,770 and Q5 is 2,440. The average M score for all the Qs is 60 and the average SD score for all the Qs stood at 2,580.

### Table 1

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>150</td>
<td>50%</td>
</tr>
<tr>
<td>Q2</td>
<td>60</td>
<td>20%</td>
</tr>
<tr>
<td>Q3</td>
<td>30</td>
<td>10%</td>
</tr>
<tr>
<td>Q4</td>
<td>35</td>
<td>11.67%</td>
</tr>
<tr>
<td>Q5</td>
<td>25</td>
<td>8.33%</td>
</tr>
</tbody>
</table>

Figure 1: Challenges of Digitalizing Institutional (Polytechnic) Libraries in North-East Nigeria
Table 2: The current nature of Institutional (Polytechnic) Libraries in North-East Nigeria

<table>
<thead>
<tr>
<th>Questions</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>F/P</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Polytechnic libraries in North-East Nigeria are not equipped with modern facilities for electronic library system.</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>55</td>
<td>200</td>
<td>60</td>
<td>5,150</td>
</tr>
<tr>
<td>Q2. Digitalization process has gone far in Polytechnic libraries in North-East Nigeria.</td>
<td>185</td>
<td>60</td>
<td>25</td>
<td>20</td>
<td>10</td>
<td>60</td>
<td>4,190</td>
</tr>
<tr>
<td>Q3. Polytechnic libraries in Nigeria’s North-East region still bear features of traditional than modern library system.</td>
<td>20</td>
<td>35</td>
<td>10</td>
<td>65</td>
<td>170</td>
<td>60</td>
<td>3,370</td>
</tr>
<tr>
<td>Q4. Structural wise, Polytechnic libraries in North-East Nigeria are not up to standard required for developing digital library system.</td>
<td>120</td>
<td>90</td>
<td>30</td>
<td>40</td>
<td>20</td>
<td>60</td>
<td>1,480</td>
</tr>
<tr>
<td>Q5. Facilities, Librarians and security available in Polytechnic libraries in Nigeria’s North-East region are sufficient for the development of digital library system in the institutions.</td>
<td>10</td>
<td>25</td>
<td>15</td>
<td>80</td>
<td>170</td>
<td>60</td>
<td>3,650</td>
</tr>
</tbody>
</table>

Q-Question, SD-Strongly Disagreed, D-Disagreed, N-Neutral, A-Agreed, SA-Strongly Agreed, Source; Author’s field survey (2022)

Table 2 clearly shows that only 3.33% of the respondents strongly disagreed that, Polytechnic libraries in North-East Nigeria are not equipped with modern facilities for electronic library system, 6.67% disagreed, 5% were neutral, 18.33% agreed while 66.67% strongly agreed. The position that, digitalization process has gone far in Polytechnic libraries in North-East Nigeria was strongly disagreed with by 61.67% of the respondents, 20% of them disagreed, 8.33% remained neutral, 6.67% disagreed and 3.33% of them strongly agreed with the position. Table 2 also shows that, 6.67% of the respondents strongly disagreed that, Polytechnic libraries in Nigeria’s North-East region still bear features of traditional than modern library system, 11.67% disagreed, 3.33% were neutral, 21.66% agreed while 56.67% strongly agreed. Also, table 2 shows that, 40% of the respondents strongly disagreed with the view that, structural wise, Polytechnic libraries in North-East Nigeria are not up to standard required for developing digital library system, 30% disagreed, 10% remained neutral while 13.33% agreed and 66.66% of them strongly agreed with the view. It is also clearly demonstrated by table 2 that, 3.33% of the respondents strongly disagreed that, facilities, Librarians and security available in Polytechnic libraries in Nigeria’s North-East region are sufficient for the development of digital library system in the institutions, 8.33% disagreed, 5% were neutral, 26.67% agreed and 56.67% of them strongly agreed. Statistically, the total average or mean (M) for Q1, Q2, Q3, Q4 and Q5 is 60 while the total average standard deviation (SD) for Q1, Q2, Q3, Q4 and Q5 is 3,568.

Source; Author’s field survey (2022)
Gambo Garba Kukuri et al., IARJ Huma Soc Sci; Vol-3, Iss- 3 (May-Jun, 2022): 11-

Table 3: Level of preparedness for developing digital library system among institutions in Nigeria’s North-East region

<table>
<thead>
<tr>
<th>Questions</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. The level of preparedness for digital library development among institutions in North-East Nigeria is low.</td>
<td>3.33%</td>
<td>15</td>
<td>25</td>
<td>70</td>
<td>180</td>
<td>60</td>
<td>4,050</td>
</tr>
<tr>
<td>Q2. Institutions in North-East Nigeria are fully prepared to develop the digital library system.</td>
<td>58.33%</td>
<td>65</td>
<td>10</td>
<td>30</td>
<td>20</td>
<td>60</td>
<td>3,650</td>
</tr>
<tr>
<td>Q3. Facilities available in institutional libraries in North-East Nigeria are insufficient for the development of digital library system.</td>
<td>5%</td>
<td>10</td>
<td>20</td>
<td>80</td>
<td>155</td>
<td>60</td>
<td>2,790</td>
</tr>
<tr>
<td>Q4. Institutional libraries in North-East Nigeria are fully equipped and ready for developing digital library system.</td>
<td>61.67%</td>
<td>70</td>
<td>25</td>
<td>15</td>
<td>5</td>
<td>60</td>
<td>4,400</td>
</tr>
<tr>
<td>Q5. Institutional libraries in North-East Nigeria need to improve their level of preparedness further to be able to develop the digital library system.</td>
<td>3.33%</td>
<td>15</td>
<td>10</td>
<td>75</td>
<td>190</td>
<td>60</td>
<td>4,830</td>
</tr>
</tbody>
</table>

As table 3 clearly shows, 3.33% of the respondents strongly disagreed with the position that, the level of preparedness for digital library development among institutions in North-East Nigeria is low 5% disagreed, 8.33% were neutral, 23.34% of them agreed while 60% strongly agreed with the position. Table 3 also indicated that 58.33% of the respondents strongly disagreed with the view that, institutions in North-East Nigeria are fully prepared to develop the digital library system, 21.67% disagreed, 3.33% preferred to be neutral, 10% agreed and 6.67% strongly agreed with the view. As also evident in table 3, 5% of the respondents strongly disagreed that, facilities available in institutional libraries in North-East Nigeria are insufficient for the development of digital library system, 10% disagreed, 6.67% remained neutral while 26.66% agreed and some 51.67% of them strongly agreed. On the assertion that, institutional libraries in North-East Nigeria need to be improve their level of preparedness further to be able to develop the digital library system, 3.33% of them strongly agreed, 5% disagreed and only 1.67% of them strongly agreed with the assertion. Table 3 also demonstrated that, 3.33% of the respondents strongly disagreed that, institutional libraries in North-East Nigeria need to be improve their level of preparedness further to be able to develop the digital library system, 5% disagreed, another 3.33% of them remained neutral while 25% of them agreed and 63.34% of them strongly agreed. Average or mean (M) for Q1, Q2, Q3, Q4 and Q5 stood at 60 while the average standard deviation (SD) for Q1, Q2, Q3, Q4 and Q5 is 3,944.

Figure 3; Level of preparedness for developing digital library system among institutions in Nigeria’s North-East region
Q-Question, SD-Strongly Disagreed, D-Disagreed, N-Neutral, A-Agreed, SA-Strongly Agreed, Source; Author’s field survey (2022)

DISCUSSION OF RESULTS

Digitalization of institutional libraries in the North-East region of Nigeria is a complex task and project. Transforming Polytechnic libraries from their traditional forms to modern or digital system no doubt requires huge capital investment. The Federal Polytechnic libraries at Damaturu, Mubi, Bauchi and Bali for ages have been yawning for digital library system. But, the fund is not available for such project to commence. In situation where fund is available, it is not adequate to embark on a project like that of developing a digitalize library system. In the year 2017, aspiration for digitalizing institutional libraries was high in the region. And, up to the present 2022, none of the institutional library in the North-East region has been digitalized. The management of Federal Polytechnics in the region in their quest for modern library system have loudly demonstrated their need for digital library system over the years. This demand could not be met or fulfilled due to lack of political will from the part of leaders. Demand for such upgrade of library facility has often been taken for granted by political leaders. Request in this regard often attract empty promises which are not fulfilled by political leaders.

The technical know-how required for sustainable management of digital library in terms of maintenance and use is very essential in addition to developing the system in Federal Polytechnics and other tertiary institutions in North-East Nigeria. Librarians in the Polytechnics in the region need special knowledge in advance and modern library system management. This will give them adequate knowledge and expertise needed to make service provision and delivery to users effective in the institutions. Digital library is an aspired system in developing countries. The initiative has long been achieved in advanced countries of the world. In Nigeria, technology is still at its lowest ebb of advancement. And, the lack of technological advancement the country is suffering from has by enlarge affect the digitalization of institutional libraries in the country’s North-East region. The Tertiary Education Trust Fund (TETFund) has been in the core front of funding library development in public tertiary institutions in Nigeria. But, fund for this purpose is not adequate in the true sense of reasoning for developing digital library system in institutional libraries in Nigeria’s North-East region. Some collaborative efforts in the form of multi-sectorial contributions will push TETFund’s efforts in the area of digitalizing institutional libraries in North-East Nigeria.

Digital library is an electronic information provision and delivery service. The current nature of institutional libraries in North-East Nigeria is very devastating and sympathetic. Epileptic power supply in the region which affects the Polytechnics under study is a serious problem should digital library system be developed. Unstable power supply will affect functionality of the system and thus result in under utilization and redundancy of the digital library in the areas of service provision and delivery. Polytechnic libraries lack modern facilities for the development of digital library system. In most of the Polytechnics in the region, the issue and problem are the same. But then, Polytechnics in the region are lucky to be part of the Tertiary Education Trust Fund (TETFund) beneficiaries thus, libraries in the Polytechnics in terms of structure wise are up to standard needed for the development of digital library system.

TETFund adopts a unify design of library complex which has made public institutional libraries the same in terms of structure and architectural designed nationwide. Though, library development fund provided by tetrofund is insufficient for the development of digital library system in institutional libraries in Nigeria’s North-East region. The level of preparedness for developing digital library system in institutions in Nigeria’s North-East region is low. The story on level of readiness for developing digital library system is similar in Federal Polytechnics in the region. The level of preparedness is poor. Arrangements toward transformation from traditional to digital library system have not even started. Available facilities in the libraries do not even signify that efforts are geared toward digitalize library system. There are little or no signs of readiness for digitalization in Federal Polytechnic libraries in the region. The region boast of ill equipped libraries that need to be improved before in addition to other forms of preparedness as steps toward improving their level of preparedness to develop the digital library system.

MAJOR FINDINGS

The study found that;
1. Inadequate fund is one the greatest challenges bedeviling the digitalization of institutional libraries in North-East Nigeria.
2. Digitalization of institutional libraries in Nigeria’s North-East region is hindered by lack of political will on the part of leaders.
3. Librarians in the institutions surveyed are not skilled in digital literacy.
4. Retraining of library science professionals will ease the stress towards digitalization of institutional libraries in North-East Nigeria.
5. Low level of technological advancement affects negatively, the digitalization of institutional libraries in North-East Nigeria.
6. Multi-Sectorial approach is necessary as contribution towards digitalization of institutional libraries in Nigeria’s North-East region.
7. The nature of facilities in institutional libraries in the North-East region is poor.
8. Polytechnic libraries in the region lack modern facilities needed for developing digital library system.
9. Digitalization process has not started in Polytechnic libraries in the region.
10. The nature of Polytechnic libraries in the region is traditional.
11. Structurally, Polytechnic libraries in the region are up to standard required for developing digital library system.
12. Facilities, Librarians and security require for the development of digital library system in Polytechnic libraries in the region are insufficient.
13. Expertise necessary for the development of digital library system is not available in Polytechnic libraries in Nigeria’s North-East region.
14. Insurgency which the North-East region is suffering from for over a decade also translates in negative effect on the development of digital library system in Polytechnic libraries in the region.
15. Digital literacy level is low among Librarians in the four selected Federal Polytechnics under study.
16. The level of readiness or preparedness for digital library system is low in the four institutions under study.

CONCLUSION
As a result of the major findings made, the study arrived at the conclusion that, inadequate fund as well as lack of political will from the part of leaders are some of the challenges of digitalizing institutional libraries in North-East Nigeria. It also reached the conclusion that the nature of facilities in Polytechnic libraries in the region is poor and traditional. The study also came to conclusion that insurgency which the region has been suffering from for over a decade also affects negatively, the development of digital library system in Polytechnic libraries in the region. It also drew the conclusion that adequate fund, modern facilities and digitally trained library science professionals are necessary for the development of digital library system in Polytechnic libraries in the North-East region of Nigeria.

RECOMMENDATIONS
Based on the conclusion drawn, the study recommended that:
1. Measures necessary for providing adequate fund needed for the development of digital library system in Polytechnic libraries in North-East Nigeria should be created. Library development fund from TETFund is appreciative. But, other channels of sourcing for fund toward achieving this objective are needed. Multi-Sectorial approach by co-opting other sectors, public and private organizations, individuals, philanthropists’, Non-Governmental Organizations (NGOs) and International agencies into serving as counterpart funder of projects in digitalization of Polytechnic libraries in the region should be created especially by the Federal Government of Nigeria and the institutions managements. Appeal fund, donation and contribution can be solicited for by the Polytechnics management periodically as part of their commitment to digitalizing their library systems.
2. Political leaders must also be willing and committed to investing public fund toward the cause of digitalizing institutional libraries in the country’s North-East region. Huge budgetary allocation on annual basis for a targeted period of years must be set as a goal towards digitalizing institutional libraries in the region by the government. Such allocation will complement the annual library development fund intervention by TETFund. The allocation should as well be guided by strict conditions in implementation to ensure that allocation provided for digitalizing Polytechnic libraries in the region is not diverted for personal purpose and into private pockets and accounts. This serious guide which ensure the judicious spending of allocated fund appropriately in the digitalization of institutional libraries in Nigeria’s North-East region.
3. Service provision and delivery in a digital library requires that Librarians operating in the library be experts and well trained in advanced as well as modern form of provision and delivering of services. Therefore, library science professionals in Polytechnic libraries in North-East Nigeria should be retrained. Digital literacy program to retrain Librarians in the four Federal Polytechnic surveyed should be created. Their retraining should be based on advanced and modern form of library service provision and delivery. They should be properly trained in digital and electronic library service provision and delivery. This second training which is expected to update their knowledge from traditional library service provision and delivery to modern form created by advancement in technology should also include sound coaching in Information and Communication Technology (ICT) capable of enabling them function effectively in electronic method of library service provision and delivery.
4. Upgrading of facilities and equipment in institutional libraries to standard needed for digitalization should be adopted by stakeholders and concerned bodies. Available facilities in Polytechnic libraries in North-East Nigeria which can be committed to the cause of digitalization if improved should be upgraded. And, in cases where facilities are not available for developing digital library system, they should be provided. Expertise and commitment toward upgrading of facilities should not be compromised. In addition to expertise, fund needed to make such upgrade possible for digital library to commence should be adequately provided.
5. Digitalization of institutional libraries in North-East Nigeria should start without further delay. Digitalization involves a series of processes which should be started as a gradual step in Polytechnic libraries in the region. The step towards digitalization does not start and ends in a day. It starts in one day and ends in a different one. Therefore, getting the necessary facilities ready gradually with time, sourcing for fund ahead of time and getting the library science professionals trained before time are good take up measures ahead of time in the digitalization process of Polytechnic libraries in Nigeria’s North-East region. The nature of Polytechnic libraries in the region still demonstrated the existence of traditional library system signifying that steps toward digitalization have not started. Necessary measures required to show that steps toward transformation from traditional to modern (digital) library system need to be adopted by Polytechnic libraries in North-East Nigeria.

Finally, it should be noted that the scope of the study is limited only to institutional libraries and specifically four selected Federal Polytechnic libraries in North-East Nigeria. Therefore, the policy suggestions or recommendations of the study are only suitable for digitalizing libraries in the institutions studied. If applied, they may not necessarily address the issue of digitalizing library in other institutions or polytechnics different from the ones surveyed by the study.

REFERENCES
Appendix 1
Library Department,
The Federal Polytechnic Damaturu,
Yobe State, Nigeria.
April 21st, 2022.

The Registrar,
Federal Polytechnic Damaturu,
Yobe State, Nigeria.

INTRODUCTORY AND REQUEST FOR PERMISSION
We are staff of the above-mentioned institution and department carrying out research on the “Challenges of Digitalizing Institutional Libraries in North-East Nigeria; A Survey of Four Selected Federal Polytechnic Libraries (2017-2022)”. We wish to request for permission in order to enable us administer our questionnaire in your institution’s library. All information obtained will be treated with maximum confidentiality and solely for the purpose of the research. With due respect Sir, we hope our request will be granted.

Thanks.
Yours faithfully,
Gambo Garba Kukuri (Lead Researcher)
Abdullahi Audu & Mohammed Musa Abubakar
(Co-Researchers)

Appendix 2
Library Department,
The Federal Polytechnic Mubi,
Adamawa State, Nigeria.
April 21st, 2022.

The Registrar,
Federal Polytechnic Mubi,
Adamawa State, Nigeria.

INTRODUCTORY AND REQUEST FOR PERMISSION
We are staff of the above-mentioned institution and library carrying out research on the “Challenges of Digitalizing Institutional Libraries in North-East Nigeria; A Survey of Four Selected Federal Polytechnic Libraries (2017-2022)”. We wish to request for permission in order to enable us administer our questionnaire in your institution’s library. And, with due respect Sir, we hope our request will be granted.

Thanks.
Yours faithfully,
Gambo Garba Kukuri (Lead Researcher)
Abdullahi Audu & Mohammed Musa Abubakar
(Co-Researchers)

Appendix 3
Library Department,
The Federal Polytechnic Bauchi,
Bauchi State, Nigeria.
April 21st, 2022.

The Registrar,
Federal Polytechnic Bauchi,
Bauchi State, Nigeria.

INTRODUCTORY AND REQUEST FOR PERMISSION
We are staff of the above-mentioned institution and library carrying out research on the “Challenges of Digitalizing Institutional Libraries in North-East Nigeria; A Survey of Four Selected Federal Polytechnic Libraries (2017-2022)”. We wish to request for permission in order to enable us administer our questionnaire in your institution’s library. And, with due respect Sir, we hope our request will be granted.

Thanks.
Yours faithfully,
Gambo Garba Kukuri (Lead Researcher)
Abdullahi Audu & Mohammed Musa Abubakar
(Co-Researchers)
INTRODUCTORY AND REQUEST FOR PERMISSION

We are staff of the above-mentioned institution and library carrying out research on the “Challenges of Digitalizing Institutional Libraries in North-East Nigeria; A Survey of Four Selected Federal Polytechnic Libraries (2017-2022)”. We wish to request for permission in order to enable us administer our questionnaire in your institution’s library. And, with due respect Sir, we hope my request will be granted.

Thanks.

Yours faithfully,

Gambo Garba Kukuri (Lead Researcher)
Abdullahi Audu & Mohammed Musa Abubakar
(Co-Researchers)

---

Appendix 4

Introductory Letter
Library Department,
The Federal Polytechnic Damaturu,
Yobe State, Nigeria.
April 21st, 2022.

Dear Respondent (s),

We are staff of the above-mentioned institution and library carrying out research on the “Challenges of Digitalizing Institutional Libraries in North-East Nigeria; A Survey of Four Selected Federal Polytechnic Libraries (2017-2022)”. We solicit for your honest response to the questionnaire attached as information provided shall be utilize for the purpose of this study only and treated with maximum confidentiality.

Thanks.

Yours sincerely,

Gambo Garba Kukuri (Lead Researcher)
Abdullahi Audu & Mohammed Musa Abubakar
(Con-Researchers)
Appendix 6
The Questionnaire

Section A: Instruction
The questionnaire is organized into five different sections. Sections “A” is the instruction, “B” is the respondents socio-demographic data, “C” is on the challenges of digitalizing institutional libraries in North-East Nigeria, “D” is the nature of institutional libraries in Nigeria’s North-East region and “E” is the level of preparedness of institutions in the region towards the development of digital library system. Respondents are requested to fill section B appropriately, And, for sections “C”, “D” & “E”, you are requested to tick just an option from the multiple options given.

Section B: Socio-Demographic Data
Institution: ---
Department: ---
Rank/Position: ---
Gender: ---
Marital Status: ---
Age: ---
No. Years in Service: ---

Section C: Challenges of Digitalizing Institutional Libraries in North-East Nigeria
1). Inadequate fund does not affect the digitization of polytechnic libraries in North-East Nigeria from 2017-2022.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)
2). Lack of political will on the part of leaders bedeviled the efforts toward digitalization of Polytechnic libraries in Nigeria’s North-East region from 2017-2022.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)
3). Library Science Professionals do not need to be retrained for digitalization of Polytechnic libraries to be done in North-East Nigeria.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)
4). Nigeria’s lack of technological advancement affects the digitalization of Polytechnic libraries in North-East Nigeria.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)
5). Multi-Sectorial efforts are not necessary as contributions toward digitalizing Polytechnic libraries in Nigeria’s North-East region.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

Section D: the nature of institutional (Polytechnics) libraries in Nigeria’s North-East region
1). Polytechnic libraries in North-East Nigeria are not equipped with modern facilities for electronic library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)
2). Digitalization process has gone far in Polytechnic libraries in North-East Nigeria.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

3). Polytechnic libraries in Nigeria’s North-East region still bear features of traditional than modern library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

4). Structural wise, Polytechnic libraries in North-East Nigeria are not up to standard required for developing digital library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

5). Facilities, Librarians and security available in Polytechnic libraries in Nigeria’s North-East region are sufficient for the development of digital library system in the institutions.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

Section E: Level of preparedness for developing digital library system among (Polytechnics) institutions in Nigeria’s North-East region

1). The level of preparedness for digital library development among institutions in North-East Nigeria is low.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

2). Institutions in North-East Nigeria are fully prepared to develop the digital library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

3). Facilities available in institutional libraries in North-East Nigeria are insufficient for the development of digital library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

4). Institutional libraries in North-East Nigeria are fully equipped and ready for developing digital library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)

5). Institutional libraries in North-East Nigeria need to be improve their level of preparedness further to be able to develop the digital library system.
Strongly Agreed (SD)
Disagreed (D)
Neutral (N)
Agreed (A)
Strongly Agreed (SA)