



# Assessment of Intervention Programmes and Technological Innovations for Library Growth in Public Universities in Nigeria

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## Authors' contributions

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## ABSTRACT

This study examined intervention programmes and technological innovations for library growth in public universities in Nigeria. It adopted a descriptive research design, with a population of 164 librarians. For data collection, an online questionnaire using Google forms was developed and administered via Nigerian Library Association (NLA) WhatsApp platforms. The questionnaire items were vetted by experts in LIS and research methods for face and content validity and administered to a group of librarians who were not part of the main study to achieve the reliability index of .804. From the 164 librarians, a total of 120 librarians from various public universities in Nigeria

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responded to the questionnaire and the data generated were analyzed using frequency counts, mean and standard deviation. The study revealed that though the librarians' awareness level of intervention programmes such as TETFund, Needs Assessment, NCC intervention, MacArthur Foundation, Carnegie Corporation, etc., was high, the general impacts of both local and foreign intervention programmes to the public universities was low. It showed that apart from TETFund intervention, other local and foreign intervention programmes were not yielding the desired impacts in the areas of providing infrastructure and facilities, donation of physical books, subscription to real-time databases, and staff training. The study revealed difficulty in accessing funds due to cumbersome processes, lack of support by university management, overbearing interests by stakeholders, corrupt practices by contractors and unresponsive attitude of management of universities as major constraints to accessing intervention programmes in Nigeria. The study recommended, among others, that management of public universities should organize regular training programmes for librarians, allow university libraries free hand to manage funds accruable to them from intervention agencies, and motivate them to seek funding from more local and foreign donor agencies for library growth.

*Keywords: Intervention; local interventions; foreign interventions; technological innovations; library growth; public universities.*

## 1. INTRODUCTION

The growth witnessed globally in library systems is principally as a result of technological innovations which culminate in the adoption of several technological tools for services delivery. Today, libraries are providing innovative spaces, top-notch infrastructure, and supporting facilities to guarantee seamless access to information based on the needs and expectations of patrons. This corroborates Akwang's [1] observation that many libraries, especially in developed countries and very few developing countries are concerned with timely provision of necessities in support of the 21<sup>st</sup> century library processes and practices to satisfy the sophisticated needs and expectations of teaming users. This seems a daunting task especially with the poor funding of education in Nigeria. Okunna [2]; Akwang [3] also noted the declining status of government budgetary allocation for education sector including libraries. However, the growth and development of libraries, especially in the area of technological innovations is highly needed for sustainable services delivery and it is often seen as the responsibility of the government and its agencies through interventions.

It is generally noted that the growth and development expected in libraries depends to a very large extent on the possible outcome of interventions especially in a poor striven economy like Nigeria's. Akpan-Atata et al. [4] note that the purpose of libraries is to support learning, teaching, research, and scholarship in ways consistent with, and supportive of the host

institutions' mission and national development. This is an indication that libraries occupy a central and primary place not only in academic institutions but also the society at large. The mandate of any university can only be met if there is functional and innovative library and resource centres established to provide state-of-the-art reading spaces, access to e-resources, opportunities for multimodal learning, and collaboration. This requires timely interventions funded by individuals, corporate organizations, religious organizations, government and its agencies. In the face of economic challenges as in the case of Nigeria, university libraries need interventions whether local or foreign to be able to compete with other university libraries in other African and European countries.

Evidence from literature revealed that Nigerian universities have been enjoying more interventions from local sponsoring bodies and a few number from foreign funders [5,6]. Local interventions are mostly associated with projects/programmes initiated and executed by individuals, corporate agencies, government-owned institutions and agencies within the host country. The notable ones in Nigeria include Sir Emeka Ofori foundation, TETFUND, Needs Assessment, NCC, NDDC, CBN interventions, etc. Foreign intervention has to do with international institutions outside the host country including MacArthur Foundation, Carnegie Corporation, Elsevier Foundation, the Mortenson Centre, etc. However, it is observed that university libraries can benefit from more than one intervention bodies or donor agencies at a time in the area of library building, donation of

facilities and other resources. This could manifest in the renovation of existing library building. Therefore, librarians, especially the heads are expected to explore and exploit available opportunities to ensure the libraries grow and develop in line with the technological advancement of this century.

A number of researchers have examined the technological innovations and their impact on libraries but little is done on the place of local and foreign interventions in providing technological innovations for library growth and development in Nigeria. To fill this knowledge gap, this study examines the librarians' awareness level on the available intervention programmes; the current status of local and foreign interventions in Nigerian public universities; and their contributions to library growth and development as regards technological innovations. The areas of interventions considered in this study are infrastructures, facilities (RFID, CCTV, Internet, power supply, etc.), resources (real-time and print), and staff training.

### 1.1 Statement of the Problem

The idea of intervention programmes originated from the fact that the management of educational systems involves high level funding which could be difficult to handle by the government alone. Accessing adequate funds for infrastructural development, staff training, and provision of other educational facilities in public universities in Nigeria is becoming more challenging with the lean finances of the Nigerian economy and the library which is a pivotal organ of any university system is also grossly affected and is in shambles. This has a damaging effect on the library buildings, resources, services, facilities, and staff quality. Many research findings reveal the decaying state of libraries in public universities in Nigeria which needs to be remedied with all amount of sincerity. This situation demeans the libraries' role in promoting teaching, learning, research, and community services within the host university. The far cry for proper funding of educational system and university libraries has been a topic of concern to government, individuals, institutions, and other stakeholders and has been repeatedly discussed at conferences, symposia, interviews, and other forums. Several efforts by local, foreign, and private organizations through intervention programmes have been recognized as strategies for improving educational standard in Nigerian public universities but with little impacts on library

growth, especially as regards technological innovations. The foregoing scenario informs the imperativeness to assess various intervention programmes *vis-à-vis* technological innovations for library growth and development in public universities in Nigeria.

### 1.2 Objectives of the Study

The purpose of this study is to assess the intervention programmes and technological innovations for library growth in public universities in Nigeria. Specifically, this study seeks to achieve the following objectives:

- i. To determine the librarians' awareness level of intervention programmes for libraries in public universities in Nigeria.
- ii. To examine the impact of local intervention programmes on technological innovations for the library growth in public universities in Nigeria.
- iii. To evaluate the impact of foreign intervention programmes on technological innovations for the library growth in public universities in Nigeria.
- iv. To identify possible constraints to access to intervention programmes by public university libraries in Nigeria.

### 1.3 Research Questions

This study seeks to answer the following research questions:

- i. What is the librarians' awareness level of intervention programmes for libraries in public universities in Nigeria?
- ii. What are the impacts of local intervention programmes on technological innovations for the library growth in public universities in Nigeria?
- iii. What are the impacts of foreign intervention programmes on technological innovations for the library growth in public universities in Nigeria?
- iv. What are the possible constraints to access to intervention programmes by public university libraries in Nigeria?

## 2. REVIEW OF RELATED LITERATURE

This literature review attempts to unearth studies on technological innovations in university libraries, as well as intervention programmes such as local and foreign interventions and their contributions to library growth in Nigerian

universities. The interventions focus on all support-based programmes aimed at equipping university libraries with state-of-the-art infrastructures, while enabling them to procure latest textbooks and journals in various academic fields through subscription to Internet and electronic databases. The interventions also address the aspect of provision of furniture and other equipment in public university libraries to achieve sustainable improvement in reading culture, teaching, learning, research and scholarship.

Technological innovation is an extended concept of innovation which has a broad meaning to many people. Innovation simply means adding extra steps to develop new services and products to fulfill unaddressed needs or solve problems that were not in the past [7]. Technological innovation is therefore the creation of nouvelle processes particularly driven by technologies adopted by organizations to develop and/or improve existing services and products. Coccia [8] defines technological innovations as new technologies or tools driven by inventions of new things or new ways of doing things that are transformed into the markets and service-oriented organizations. Similarly, Mensa et al. [9] conceive technological innovations as new, creative, inventive, and modern technologies used in enhancing the quality, efficiency, effectiveness and timeliness of service delivery in any organization such as the university libraries. Technological innovations facilitate the satisfaction of needs, achievement of goals, and problem-solving by taking advantage of important opportunities, or coping with consequential problems and environmental threats.

Garland [10]; Akwang & Usoro [11]; Singh & Sharma [12]; Odeyemi [13] note that technological innovations in university libraries include Internet, facial recognition technology, RFID, library bookmark application, big data, cloud technology, and Internet of Things (IoT). Pope [14]; Oyelude [15] also remarked that technological innovations such as augmented reality (AR), virtual reality (VR), QR (quick response) barcode technology, gamification, artificial intelligence, and robotics are transforming the services of university libraries, improving work capabilities of staff, satisfying users' needs, and bridging the information gap in tremendously positive ways. These tools facilitate the acquisition, and processing of valuable information for dissemination to users,

as well as help in effective lending services, library security, users' inquiries, interlibrary loan requests, SDI services, email services, e-books, e-journals, online databases, etc. [16,17,9].

However, considering the increasing cost implications of acquiring technological innovations in public university libraries, it becomes apparent that no single university management or even the government can effectively handle funding of technological innovations alone. Thus, local and foreign intervention programmes such as TETFUND, Needs Assessment, Nigerian Communication Commission (NCC), Book Aid International, Book for Africa, MTN Foundation, Carnegie Cooperation, MacArthur, Ford Foundation, Sir Emeka Ofor Foundation, Rockefeller, World Health Organization, etc., become desired alternative sources of funding for library growth. Other corporate organizations such as World Bank, and Central Bank of Nigeria, as well as private individuals also intervene in supporting educational system and university libraries by way of gifting buildings, books, equipment, and furniture to support effective services delivery in Nigeria [5,6].

Meanwhile, Oduwole et al. [18] examined the adoption of innovative library products and services among library and information science professionals in Nigeria. The study identified the challenges militating against innovative library products and services among libraries in Nigeria to include inadequate knowledge, poor leadership and management, and poor funding of public university libraries. Similarly, Mensa et al. [9] conducted a systematic analysis on the adoption of innovative technologies in the provision of electronic information services in public university libraries in Akwa Ibom State, Nigeria. The study found that though innovative technologies have strong implications in ensuring easy provision of quality information services, but the types of innovative technologies available for use in the public university libraries was inadequate, and the level of adoption was low. It identified that poor internet connectivity, inadequate innovative technologies, inadequate skills for the use of innovative technologies among librarians, poor funding of public university libraries, etc., are the major challenges militating against the adoption of innovative technologies in the provision of electronic information services in public university libraries.

Omosidi et al. [19] investigated interventions of Tertiary Education Trust Fund (TETFUND) and lecturers' productivity in Kogi State Colleges of Education, Nigeria. The study revealed that TETFund is a very prominent intervention programme, which has done considerably well in enhancing staff training and development, research and academic growth, instructional facilities, library development and physical infrastructure. It concluded that these TETFUND has significant impacts on the level of lecturers' productivity in government owned Colleges of Education in Kogi State, Nigeria. Onyeneke & Ahaneku [6] investigated the intervention of TETFund in the provision of library resources in academic libraries in Imo State, Nigeria. The study found that TETFund interventions, to a high extent, helped in the provision of information resources at the two universities studied. It found that in-house politics, ineffective collection development policy, cumbersome process for accessing the funds, showing no concern in accessing funds, problem of disbursement of funds from TETFund, etc., are the challenges of intervention programmes in the universities. It recommended that concerned government ministries and agencies should monitor the activities of TETFund to ensure that universities benefit equally, and the projects executed according to standard and specifications.

In another study, Anaehobi & Agim [20] examined TETFund intervention and development of university libraries in South-East, Nigeria. The study revealed that TETFund interventions have enabled university libraries in South-East, Nigeria to acquire information resources such as new encyclopedias and other reference sources, sponsor staff development programmes, improve physical infrastructure, as well as execute research and publications of books and journals by library staff. The study recommended that since the funding situation of Nigerian university libraries is consistently dwindling, TETFund should increase its allocations to institutions in order to enhance university library development. This was also supported by Udu & Nkwede [21], who explored Tertiary Education Trust Fund interventions and sustainable development in Nigerian universities with evidence from Ebonyi State University, Abakaliki. The study found that TETFUND allocations were used in the university to improve library services and services, teaching practice, staff training and development, research grant, publication of journal, conference attendance, and publication of scholarly manuscripts.

Ibrahim & Daudu [5] equally examined the relevance of donation to special federal tertiary institution libraries in Zaria, Kaduna State. The study revealed that organizations donating to special federal tertiary institution libraries include MacArthur Foundation, Carnegie Cooperation, Ford Foundation, MTN Foundation, Book Aid International (BAI), Nigeria Book Foundation (NBF), etc. It showed further that the most donated resources to the libraries were books and journals. It indicated that libraries mostly benefit from individual and corporate donors but their donations are not often relevant to meet the needs of the libraries. It recommended that libraries should seek support from local and foreign donors such as Nigerian Book Foundation (NBF), Sir Emeka Ofor Foundation (SEOF), MacArthur Foundation, Ford Foundation, Carnegie Corporation, etc.

Cramer [22] studied the benefits, challenges and sustainability of international library development in Africa. The study revealed that shortages of books and libraries exist in many developing countries, making it difficult for people to develop and maintain literacy skills. It found that Westerners have created non-profit international library development (ILD) programmes to build libraries, furnish them with books, and train library staff. The study also showed that there is little research on international library development programmes, even though the programmes are playing a central role in international education, supporting local schools and educational efforts by providing materials and programmes to support literacy. The study identified financial instability of partner organizations, lack of capacity in managerial skills, and shortage of materials available to create relevant book collections as issues confronting international library development programmes in Africa. It recommended that measures should be taken to avoid the mistakes of past book donation and incorporate local persons into advisory boards as members of library staff in order to sustain international library development programmes.

Adeyomoye [23] in a study revealed that Nigerian Book Foundation (NBF) donated 300 volumes of books to libraries in South-West geo-political zone of Nigeria while others received between 100 and 300 volumes of books in their institution libraries. Zakari & Okojie [24] also showed that interventions such as Carnegie cooperation, MacArthur and Ford foundation, Book Aid International (BAI) and the Library Development

Funds (LDF) arrangement by the National University Commission (NUC) have continued to serve as buffers to the degenerating academic and public libraries, and have saved the libraries in Nigeria from total collapse. However, from the available and accessible literature within the reach of these present researchers, only TETFUND intervention programme was given a reasonable empirical research attention. This was despite the fact that there could be other local and foreign intervention programmes with implications on technological innovations for library growth in public universities. Thus, this study was conducted to fill the observed gap, and also make recommendations on how public university libraries can leverage on the available local and foreign intervention programmes for library growth in Nigeria.

### 3. METHODOLOGY

This study adopted a descriptive research design, with four (4) research objectives and four (4) research questions. A 5-parts online questionnaire was developed using Google forms and administered via Nigerian Library Association WhatsApp platforms. The questionnaire items were vetted by experts in LIS and research methods for face and content validity and administered to a group of librarians who were not part of the main study, which yielded a reliability index of 0.80, using Cronbach Alpha formula. From the 164 librarians, a total of 120 librarians from various public universities in

Nigeria responded to the questionnaire and the data generated were analyzed using frequency counts, mean and standard deviation. The raw data were coded using Statistical Package for Sciences (SPSS-Version 23), and analysed using frequency counts, percentages, mean and standard deviation.

### 4. RESULTS AND DISCUSSION OF FINDINGS

**RQ 1:** What is the librarians' awareness level of intervention programmes for libraries in public universities in Nigeria?

Table 1 reveals that librarians' awareness level of intervention programmes for library growth in public universities in Nigeria is high. It indicated that librarians are aware of majority of both local and foreign intervention programmes with a higher grand mean of 2.70 against the 2.50 benchmark mean. Specifically, the results show that local intervention programmes such as TETFUND (3.38; 0.77); Needs Assessment (3.25; 0.78); NCC intervention (3.08; 0.75) have the highest level of awareness, while MacArthur (3.00; 0.87); and Carnegie Corporation (2.93; 0.96), which are foreign intervention programmes follow. This finding partially agrees with Onyeneke & Ahaneku [6], which revealed that TETFund intervention is highly known and helpful in the provision of information resources to university libraries.

**Table 1. Mean and standard deviation responses on the Librarians' Awareness Level of Intervention Programmes**

(n = 120)								
S/N	Local Interventions	HA	A	MA	NA	Mean	Std. Dev.	Remark
1.	TETFund	65	38	15	2	3.38	0.77	Agree
2.	Needs Assessment	53	46	19	2	3.25	0.78	Agree
3.	NCC interventions	36	59	23	2	3.08	0.75	Agree
4.	Central Bank of Nigeria	15	25	72	8	2.39	0.80	Disagree
5.	Telecommunications systems such as MTN, Airtel, etc.	23	68	22	7	2.89	0.78	Agree
6.	Federal Ministry of Finance	8	32	65	15	2.28	0.77	Disagree
<b>Foreign Interventions</b>								
7.	MacArthur Foundation	37	54	21	8	3.00	0.87	Agree
8.	Carnegie Corporation	41	40	29	10	2.93	0.96	Agree
9.	Bill and Melinda Gate Foundation	12	12	86	10	2.22	0.74	Disagree
10.	Ford Foundation	33	50	27	10	2.88	0.91	Agree
11.	Elsevier Foundation	9	26	51	34	2.08	0.89	Disagree
12.	The Mortenson Centre	7	16	56	41	1.91	0.84	Disagree
	Grand Mean					2.70	0.82	Agree
	Criterion Mean					2.50		

**Keys:** HA-Highly Aware; A-Aware; MA-Moderately Aware; NA-Not Aware

**Source:** Researchers' Field Survey, 2024

**RQ 2:** What are the impacts of local intervention programmes on technological innovations for the library growth in public universities in Nigeria?

Table 2 shows the mean and standard deviation responses on the impact of local intervention programmes on technological innovations for the library growth in public universities in Nigeria. The results reveal a cumulative mean of 2.20, which is less than the 2.50 criterion mean. This explicitly indicated that TETFUND intervention programme is the most impactful local intervention programme with impacts cutting across the provision of facilities (3.20; 0.84); library building (3.04; 0.89); and physical books (2.82; 0.99) to support technological innovations for library growth. The results further reveal that other local intervention programmes, cumulatively have a low impact on technological innovations in the universities under investigation. It showed that though the level of awareness of local intervention programmes in the universities was found to be high, but the real impacts of the programmes in terms of contributing to the physical infrastructures and other aspects of growth in the university libraries fall short of expectation. This findings partly agree with Omosidi et al. [19]; and Onyeneke & Ahaneku [6], which revealed that TETFund intervention programme has done considerably well in enhancing staff training and development, research and academic growth, instructional facilities, library development and physical infrastructure. Meanwhile, the findings revealed that library building and other elements investigated can be funded by more one donor agency in support of technological innovations in libraries.

**RQ 3:** What are the impacts of foreign intervention programmes on technological innovations for the library growth in public universities in Nigeria?

Table 3 reveals the mean and standard deviation responses on the impact of foreign intervention programmes on technological innovations for library growth in public universities in Nigeria. It indicated a lower grand mean of 2.10 against the 2.50 criterion mean, which implies that the overall impacts of foreign intervention programmes on technological innovations for library growth in public universities in Nigeria is very low. This situation was attributable to inability of librarians to access foreign

intervention programmes due to lack of knowledge to effectively go through various processes involved in accessing foreign intervention programmes. This findings in a way, corroborates Cramer [22], which revealed that though Westerners through International Donor Organizations have created non-profit international library development (ILD) programmes to build libraries, furnish them with books, and train library staff but research is not adequately conducted on the provisions to facilitate effective access to the foreign intervention programmes. It however, disagrees with the study by Zakari & Okojie [24], which found that foreign interventions like Carnegie cooperation, MacArthur and Ford foundation, and Book Aid International (BAI) have continued to serve as buffers to the degenerating academic libraries, thus saving the libraries in Nigeria from total collapse.

**RQ 4:** What are the possible constraints to access to intervention programmes by public university libraries in Nigeria?

Table 4 reveals an overall affirmation on the possible constraints in accessing intervention programmes on technological innovations for library growth in public universities in Nigeria. The result indicated a higher cumulative mean of 2.90 against the 2.50 criterion mean. It specifically identified difficulty in accessing funds due to cumbersome processes (3.30; 0.72); lack of support by university management to access funding (3.19; 0.76); overbearing interests by stakeholders (3.15; 0.86); corrupt practices by contractors (3.00; 1.01) and unresponsive attitude of university management as the major constraints to accessing intervention programmes and technological innovations for library growth in public universities in Nigeria. The finding partially agrees with Onyeneke & Ahaneku [6], which revealed that in-house politics, ineffective collection development policy, difficulty in accessing funds, lack of interest in accessing funds, problem of disbursement of funds from TETFund, etc., are the challenges of intervention programmes in universities. The finding also partially aligns with Cramer [22]; Ibrahim & Daudu [5], which found that financial stability of partner organizations, lack of capacity in managerial skills, and irrelevant donations which do not often meet the needs of libraries are the impediments to intervention programmes and technological innovations for library growth.

**Table 2. Mean and Standard Deviation Responses on the Impacts of Local Intervention Programmes**

								(n = 120)
S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	My library building was built by TETFund in support of technological innovations 93	41	52	18	9	3.04	0.89	Agree
2.	TETFund has provided facilities to support technological innovations in my library	50	50	14	6	3.20	0.84	Agree
3.	TETFund has paid for subscription to real-time databases for my library	6	27	69	18	2.18	0.74	Disagree
4.	TETFund has provided physical books for my library	36	40	30	14	2.82	0.99	Agree
5.	TETFund has trained library staff on technological innovations	24	23	45	28	2.36	1.05	Disagree
6.	My library building was built through Needs Assessment 28	10	18	62	30	2.07	0.86	Disagree
7.	Needs Assessment has provided facilities to support technological innovations in my library	2	7	66	45	1.72	0.65	Disagree
8.	Needs Assessment has paid for subscription to e-resources for my library	9	25	62	24	2.16	0.83	Disagree
9.	Needs Assessment has provided physical books for my library	10	8	77	25	2.03	0.78	Disagree
10.	Library staff have been trained through Needs Assessment	4	21	65	30	1.99	0.75	Disagree
11.	My library has enjoyed NCC intervention in the aspect of infrastructural development	4	8	67	41	1.79	0.71	Disagree
12.	NCC has donated facilities to my library	42	45	23	10	2.99	0.94	Agree
13.	My library has received books, journals, and other resources from NCC	12	18	62	28	2.12	0.88	Disagree
14.	Library staff have been trained by NCC	4	14	63	39	1.86	0.75	Disagree
15.	My library building was built by the Central Bank of Nigeria (CBN) 26	13	13	44	50	1.91	0.98	Disagree
16.	Central Bank of Nigeria has donated books and other resources to my library	3	16	61	40	1.85	0.74	Disagree
17.	CBN has consistently provided Internet subscription to my library	1	31	60	28	2.04	0.73	Disagree
18.	Library staff have been trained by CBN	13	19	64	24	2.18	0.88	Disagree
19.	Telecommunication companies such as MTN, Airtel, Etisalat, etc built my library	1	16	77	26	1.93	0.62	Disagree
20.	Telecommunication companies such as MTN, Airtel, Etisalat, etc., has donated facilities for my library	8	11	91	10	2.14	0.65	Disagree
21.	Telecommunication companies such as MTN, Airtel, Etisalat, etc has trained staff in my library	5	25	60	30	2.04	0.79	Disagree
22.	Telecommunication companies such as MTN, Airtel, Etisalat, etc donated books and other information resources to my library	8	18	54	40	1.95	0.87	Disagree
Grand Mean						2.20	0.81	Disagree
Criterion Mean						2.50		

**Keys:** SA-Strongly Agree; A-Agree; D-Disagree; SD-Strongly Disagree

**Source:** Researchers' Field Survey, 2024

**Table 3. Mean and Standard Deviation Responses on the Impact of Foreign Intervention Programmes**

								(n = 120)
S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	My library building was built and donated by MacArthur Foundation	1	9	65	45	1.72	0.64	Disagree
2.	MacArthur Foundation has provided facilities to support technological innovations in my library	11	77	31	1	2.82	0.59	Agree
3.	MacArthur Foundation has donated books to my library	0	14	68	38	1.80	0.63	Disagree
4.	MacArthur Foundation has paid for subscription to real-time databases for my library	2	13	73	32	1.88	0.66	Disagree
5.	MacArthur Foundation has trained library staff on technological innovations	14	18	49	39	2.06	0.97	Disagree
6.	My library building was built and donated by Bill and Melinda Gate Foundation	11	8	75	26	2.03	0.81	Disagree
7.	Bill and Melinda Gate Foundation has provided facilities to support technological innovations in my library	8	19	56	37	1.98	0.86	Disagree
8.	Bill and Melinda Gate Foundation has donated books for my library	7	21	63	29	2.05	0.81	Disagree
9.	Bill and Melinda Gate Foundation has paid for subscription to real-time databases for my library	14	13	61	32	2.08	0.92	Disagree
10.	Bill and Melinda Gate Foundation has trained library staff on technological innovations in my library	10	19	68	23	2.13	0.82	Disagree
11.	My library building was built and donated by Ford Foundation in support of technological innovations	6	26	73	15	2.19	0.71	Disagree
12.	Ford Foundation has provided facilities to support technological innovations in my library	7	19	53	41	1.93	0.86	Disagree
13.	Ford Foundation has donated books for my library	6	15	62	37	1.92	0.79	Disagree
14.	Ford Foundation has paid for subscription to real-time databases for my library	8	20	53	39	1.98	0.87	Disagree
15.	Ford Foundation has trained library staff on technological innovations in my library	11	28	58	23	2.23	0.86	Disagree
16.	My library building was built and donated by Carnegie Corporation in support of technological innovations	3	23	66	28	2.01	0.73	Disagree
17.	Carnegie Corporation has provided facilities to support technological innovations in my library	9	28	60	23	2.19	0.83	Disagree
18.	Carnegie Corporation has donated books for my library	6	22	68	24	2.08	0.76	Disagree
19.	Carnegie Corporation has trained library staff on technological innovations in my library	6	11	79	24	1.99	0.70	Disagree
20.	Carnegie Corporation has paid for subscription of real-time databases in support of technological innovations in my library	8	22	72	18	2.17	0.76	Disagree
21.	My library building was built and donated by Elsevier Foundation in support of technological innovations	19	35	45	21	2.43	0.96	Disagree

S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
22.	Elsevier Foundation has provided facilities to support technological innovations in my library	11	22	60	27	2.14	0.87	Disagree
23.	Elsevier Foundation has donated books for my library	8	22	65	25	2.11	0.81	Disagree
24.	Elsevier Foundation has trained library staff on technological innovations in my library	4	16	91	9	2.13	0.57	Disagree
25.	Elsevier Foundation has paid for subscription of real-time databases in support of technological innovations in my library	5	39	63	13	2.30	0.72	Disagree
26.	My library building was built and donated by the Mortenson Centre in support of technological innovations	9	19	71	21	2.13	0.79	Disagree
27.	The Mortenson Centre has provided facilities to support technological innovations in my library	12	17	76	15	2.22	0.79	Disagree
28.	The Mortenson Centre has donated books for my library	9	8	76	27	1.99	0.77	Disagree
29.	The Mortenson Centre has trained library staff on technological innovations in my library	4	20	79	17	2.09	0.66	Disagree
30.	The Mortenson Centre has paid for subscription of real-time databases in support of technological innovations in my library	9	25	63	23	2.17	0.82	Disagree
Grand Mean						2.10	0.78	Disagree
Criterion Mean						2.50		

**Keys:** SA-Strongly Agree; A-Agree; D-Disagree; SD-Strongly Disagree

**Source:** Researcher's Field Survey, 2024

**Table 4. Mean and Standard Deviation Responses on the Possible Constraints in Accessing Intervention Programmes**

(n = 120)								
S/N	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	Lack of awareness of available intervention programmes	11	24	38	47	1.99	0.98	Disagree
2.	Lack of knowledge on how to write acceptable proposals for funding agencies	40	40	27	13	2.89	0.99	Agree
3.	Difficulty in accessing funds due to cumbersome processes	51	57	9	3	3.30	0.72	Agree
4.	Lack of support by university management to access funding	45	56	16	3	3.19	0.76	Agree
5.	Delay in documentation of proposals	27	64	22	7	2.93	0.80	Agree
6.	Corrupt practices by contractors	47	40	19	14	3.00	1.01	Agree
7.	Overbearing interests by stakeholders	48	48	18	6	3.15	0.86	Agree
8.	Delay in the disbursement of funds from funding agencies	27	47	31	15	2.72	0.95	Agree
9.	Unresponsive attitude of university management	40	46	23	11	2.96	0.95	Agree
Grand Mean						2.90	0.89	Agree
Criterion Mean						2.50		

**Keys:** SA-Strongly Agree; A-Agree; D-Disagree; SD-Strongly Disagree

**Source:** Researcher's Field Survey, 2024

## 5. CONCLUSION

Intervention programmes and technological innovations are of great importance for library growth and effective services delivery in public universities. Local and foreign intervention programmes serve as hedge against insufficient funding of public university libraries. In this study, it was discovered that though librarians' awareness level of intervention programmes for library growth in public universities in Nigeria was high, the general impacts of both local and foreign intervention programmes to the public universities under investigation was below expectation. It was ascertained that apart from TETFUND intervention, other local and foreign intervention programmes were not yielding the desired impacts in the areas of providing infrastructure and facilities, donation of physical books, subscription to real-time databases, and even staff training in the libraries. The study found that difficulty in accessing funds due to cumbersome processes, lack of support by university management, overbearing interests by stakeholders, corrupt practices by contractors and unresponsive attitude of management of universities are the major constraints to accessing intervention programmes and technological innovations for library growth in public universities in Nigeria.

## 6. RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

- i. Management of public universities should organize or sponsor librarians to attend training opportunities in order to equip them with relevant skills and knowledge of writing and/or developing acceptable proposals.
- ii. Public university management should allow university libraries free hand to manage funds accruable to them from intervention agencies or donors.
- iii. Universities should seek collaboration and partnership with universities in developed countries for possible library interventions.
- iv. Management of public university libraries should create more awareness and sensitization programmes to equip librarians with adequate and useful information on available intervention programmes and the processes of accessing them for library growth.
- v. Donor agencies should moderate, modify or relax some of their cumbersome processes and procedures to encourage access to funding opportunities by public university libraries for library growth.
- vi. Librarians in public university libraries should consciously collaborate with international and local professional associations in order to take advantage of available intervention programmes.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

The authors hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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