

## **Knowledge of Various Types of Online Information Resources and Utilisation by Librarians for Effective Services Delivery in Public University Libraries in South-East, Nigeria**

**By**

**Edward C. R. Amadi (PhD, CLN)**

*edwardamadi50@gmail.com*, Phone: 08036603947

**University Library, Michael Okpara University of Agriculture, Umudike**

### **Abstracts**

*The main goal of this study was to assess the librarians' understanding of the many types of online information sources and the technologies used to find, gather, organise, and use them in order to give successful library services in public university libraries in South East, Nigeria. Three objectives, three research questions, and one hypothesis were developed and tested at the 0.05 level of significance to serve as the study's guiding principles. The study used a descriptive survey as its methodology. 174 core professional university librarians from Federal and State public universities in the South-East of Nigeria made up the study's population. The whole census sampling method was used. Data were gathered using a standardised questionnaire instrument. Using Cronbach Alpha, validated copies of the questionnaire were assessed for reliability. The reliability coefficient obtained was 0.94, supporting the dependability of the questionnaire. Out of the 174 questionnaires that were distributed to the respondents, 157 were returned, or 90% of the total. In order to calculate the frequency counts and mean scores, descriptive statistics were used to analyse the data and show it in tables. Each item's agreement was determined by using a criterion mean of 2.50. Although not all of the tools known are fully utilised, especially in the federal university libraries, the study showed that there was good knowledge of online information resources and the tools with which they are utilised for effective service delivery in the university libraries under study by the librarians.*

**Key words:** Online, Information, Resources, Utilisation, Services, University library/Librarians.

## Introduction

Unquestionably, information and communication technology (ICT) has brought revolutions, disclosures, and breakthroughs to the modern world that have had a significant impact on how various services are delivered. This has produced a number of approaches to make accomplishments and contributions to human endeavours and activities easier. The information and communication sector has adopted new words and language as jargon as a result of its overpowering influence and twiggling effects. Prominent among them are: "online", "Internet", "wireless", "inter face" and "cloud" operations and their utilisation for effective harnessing and dissemination of information, information resources and other services delivery patterns locally and globally with Local Area Network (LAN) or Wide Area Network (WAN) (Amadi, 2021). These are no longer news and therefore cannot be over emphasized. As it stands, online information/information resources vis-a-vis sources are quite numerous and varied. Their common nature is that they are operated using electricity together with any electronic devices which the computer with its peripherals is main.

For the efficient delivery of information works and services, almost all professionals across a wide range of professions and sectors are integrating and employing a variety of ICT online/Internet platforms. The banking sector is a prime example of how online and Internet-based service delivery is taking root and has significantly replaced many manual methods of information and resource gathering, usage, and transmission, among other service delivery and transactional methods. In the current state of librarianship, where online approaches and applications have also improved the delivery of library and information services, university librarians, whose primary focus is university libraries, are not excluded from this trend and scenario. According to a popular saying; "people are destroyed for lack of knowledge", which indeed follows that "knowledge is power". A good knowledge of the various types of online information resources and tools utilized in library services delivery, (university libraries particularly), tremendously has been enhancing prompt, faster and timeless availability and utilisation of library and information resources and services delivery, irrespective of the time, distance and location of both the service giver and receiver respectively.

According to this study, the term "Internet" is a general one that also denotes "online," and as a result, both terms can be used interchangeably as ICT offshoot words. In order to effectively

supply services in libraries, this study uses online to represent electronic/electrical processes of harnessing things/materials placed in the "cloud" and how they are obtained.

### **Statement of the Problem**

The use of online/Internet methods and applications in the delivery of various services in the modern world ensures and provides access to databases kept in distant computer systems around the world via a telecommunications connection or an electronic network that are harnessed and usable in various walks and services of life endeavours. The use of online information resources (OIR) for efficient service delivery by university librarians is widespread, all-pervasive, and revolutionising in libraries. However, from the observation made on the public university librarians in the South-East, Nigeria by this author, there seems to be a distance between most of the university librarians and online/Internet resources and tools especially as it concerns the application of the later (online information and tools) to the delivery of professional services by the former (university librarians). The impression therefrom was that they face some challenges utilising online information resources and the required tools, in their services delivery. This is assumed to have contributed to some extent the lack of effective service delivery by the university librarians, and this suspicion required a scientific investigation.

### **Objectives of the Study**

The purpose of this study is to determine types of online information resources /tools utilized for effective library services delivery in public university libraries in South-East, Nigeria. To achieve the purpose of the study, the specific objectives are:

- i. To identify types of online information resources utilized by public university librarians for effective services delivery in public university libraries in South East, Nigeria.
- ii. To determine the extent the public university librarians were aware of the various types of online information resources utilized for effective services delivery in public university libraries in South-East, Nigeria;
- iii. To identify challenges militating against effective utilisation of online information resources for effective services delivery in public university libraries in South-East, Nigeria.

## Research Questions

- i. What are the types of online information resources utilized by public university librarians for effective services delivery in public university libraries in South-East, Nigeria?
- ii. What extent is the awareness of the public university librarians on the utilisation of online information resources for effective services delivery in public university libraries in South-East, Nigeria?
- iii. What are the challenges militating against online information resources utilisation for effective services delivery in public university libraries in South-East Nigeria?

## Hypothesis

**H<sub>01</sub>:** There is no significant difference between the mean scores of librarians in federal and state-owned public universities libraries on the knowledge of types of online information resources utilized for effective services delivery in public university libraries in South-East, Nigeria.

## Literature Review

### Online

The generic phrase "Internet" also includes the word "online," and it can be used synonymously and interchangeably with other ICT-related terms. The electronic/electrical process of harnessing items/materials lifted in the "cloud" and what are gotten from it from anywhere in the world, with good speed, timely, and timelessly; in any required quantity; and their utilisation for effective service delivery in the public university libraries is, therefore, used online in this paper. Online and Internet information sources come in a wide range of formats and are also used to enrich the library's collection of books and other materials. In contrast to a stand-alone system, Reitz (2004) defined online as the connectivity of computers to the Internet via telecommunications cables. Reitz further stated that, online refers to the accessories or devices physically separate from, but directly connected to, and under the control of a central processing unit (CPU) and ready for interactive use in real time. Kennan and Johnstone (2000) define it as a "direct real-time communication with central processor of a computer via terminals or separate computers". Online, according to Reitz (2004), is used synonymously in libraries

with the words, "automated, computerized, e-resources, network electronic information resources (NEIR), digital system and world wide web (www)".

### **Information**

Information as a word/term in the opinion of this paper is universally used in every day moment by moment conversations or discussions of people. It could be applied as suitable as its user(s) in all spheres of life activities put it and understand it to be. The use of the word "information" cuts across disciplines as it cannot be easily pinned to one particular profession or business. Information generally, implies any ideas or knowledge communicated and received. It educates, advertises and enlightens which can bring about reactions (changes) in individuals or organisations. It aids in clearing doubts in respect of people's mind agitations, and decision making or taking, in order that people, institutions and organisations do not derail from achieving desired results. Information could be by symbols, signs, oral forms etc.

### **Resources(s)**

Resource(s) is anything or things that may be used to achieve an aim; usually for the purposes of information (that is; enlightenment/knowledge or even more enlightenment/knowledge) on a particular subject, items or agenda as the case may be (Amadi, 2021). Books, newspapers, libraries, databases, computers or equipment and other media and their respective personnel even the radio, television etc. that provide information for teachers and students and others, are examples of resources for information (Hornby, 2010). Resources and sources are mostly confused to have the same meaning, which is not true (Pattar, 2017). According to Pattar, resources are things that are readily available for utilisation and sources are the places from where we get things from. As corroborated by English, (2017) a source is that from which something comes.

Therefore, in the context of this paper, "online information resources" (OIRs) refers to all such information products that are hosted in the cloud (networks), which are browsed to obtain pertinent information, and resources that are utilised in various ways and for various purposes of business and service delivery in university libraries. Computers and the connectivity of its peripherals are used as the tools for manipulating them. Therefore, the supply of online information and information resources services is electronic and is completed electronically. Online (electronic) resources, according to Nwosu and Opara (2019), are documents that must be

accessed and used through computer mediation, or are made available for usage if necessary. According to them both online and offline information material resources such as the CD-ROMs fall within this category. They refer to all the resource products that a library provides electronically through the use of computer networks or connectivity. They are delineated in this paper to imply those information materials and tools (data and/or programs), suitable, relevant and encoded for manipulation by computerized devices either in a Local Area Network (LAN) or Wide Area Network (WAN), as described by Quadri, Adetimirin and Idowu (2014).

According to Vasishta (2008), online information resources (OIR) is a broader term that encompasses abstracting and indexing services, full-text by materials such as newspapers and reference books, electronic journals and offerings of electronic "aggregators", articles delivery services and free resources on the internet. Arms (2000) define online information resources as "a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network". However, according to Bertroit (2004), online services and resources in libraries can come in a variety of forms, such as searching library holdings, placing holds on or recalling materials, requesting an interlibrary loan, licencing online databases, e-journals, and e-books for customer access, digitising library collections for online access, offering well-organised web pages that direct users to library and non-library content, and providing real-time and asynchronous information.

Online information resources may include three types of networked information systems (Mritunjay, (2006): (a) Local Area Networks systems: The file servers in LAN are loaded with microcomputer-based applications including various CD-ROM type databases. All microcomputers-based workstations are linked to one or more file servers to share various applications and information. Thus, LAN is a distributed network system. (b) Online integrated library management systems (ILMS): also categorized as INTERNET. This type of network system handles traditional library functions such as circulation, interlibrary loan, cataloguing, acquisition, serial control and online public access catalogue (OPAC), which this paper also reflects. (c) Wide Area Network Systems: These systems communicate with the Internet through Gopher, World Wide Web (WWW), Wide Area Information Server (WAIS), and other Internet Index Tools. Online information resources (e-resources) are in the form of E-Books, E-Journals, Online Public Access Catalog (OPAC), CD-ROMs, Online database, Internet resources,

electronic link and web publishing. Added and ascribed online information resources in this paper are other off-line electronic information resource versions. These include; e-data-archives, e-manuscripts, e-maps, e-magazines, e-theses, e-newspapers, e-mails, e-research reports, e-bibliographic database which also are accessible through electronic machine systems' ways, patterns and protocols (Vasishta, 2008). They edify and make richer the libraries holdings, for effective services delivery by the librarians to their varied clientele.

### **Utilisation**

All the library and information resource materials harnessed in a university library are for utilisation. Utilisation in library parlance is the application or putting of various tools or facilities of work to achieve desired goals or expectations for effective service delivery. In the words of Duranceau (2008), utilisation is the degree to which people use a system or product to a successful completion of a task for which it was employed. Hornby, (2010) defines utilisation as the process of using something. Online information resources as materials are utilized for effective service delivery in university libraries. Uhegbu (2007) conceptualizes utilisation as the actual putting into appropriate use of acquired information. In this paper invariably, utilisation of online information resources is similarly applicable.

Utilisation of online information resources by librarians is the hub that results in effective service delivery in university libraries. Utilisation in the concept of this paper further refers to the application of numerous information resources uploaded and generated into and from the Internet respectively through the manipulation of computer networks and connectivity. Utilisation of online information resources for effective service delivery differs from one library to another depending on needs of users, the extent ICT configurations are on ground in the library and other variables. In the present age of information explosion and utilisation, it is rare or strange to see a university library and its librarians not complementing and effectively consummating their services delivery without online information resources utilisation.

Hornby, (2010) explains utilisation as "to make use of available service resources at the individuals' disposal". Utilisation therefore is a complex behavioural phenomenon that is related to availability. Online information resources are made more meaningful when they are appropriately and properly utilized for effective library services delivery, that is; in meeting the information needs of the university library patrons.

## Services

Services are the duties an individual or groups of individuals renders as professionals or not professional, to person(s) in society, organisations or establishments which the service receivers find useful in satisfying their needs. Services are either for free or for fee. This however, depends on the institution/organisation involved. Services also are valuable actions, deeds or efforts performed to satisfy needs or demands (Hornby, 2020). Ultimately, services are actions of activities that are rendered to someone or doing something for someone. In respect of library services in the context of this paper, the concept of services delivery is the ability of librarians to professionally strive to process and organise information resources (both online and traditional) made available, and the ability to utilize them in meeting the overall information needs, queries, and demands of the library users. (Okuonghae, Ijeh and Erhabor, 2018)).

There are both outreach and in-house library services. Outreach library services take services to the clientele's domain or abode, while the in-house services are the opposite. Utilisation of online information resources in library services delivery makes both modes of services (outreach and in house) effective. It is in this light and focus that *effective services delivery* in this paper implies; a timely, timeless, speedy, accurate, simple and easy provision of profuse online information resources, that meets the information needs of the library user. Services of this nature can take place with or without a one-on-one interface irrespective of the location of the patrons.

## University librarians/Libraries

This category of librarians is fashioned a bit differently in orientation to curiously and constantly put efforts that help to increase and up-hold the information resources knowledge base of the university staff and students for research, teaching and learning. They are academics *sui generis*, and serve the colleges or faculties of the universities. Today's university (academic) librarians are involved in a variety of challenging library services delivery. They may consult with individual library users in analysing, identifying and fulfilling their information needs; create campus wide information literacy programs and deliver classroom instructions to strengthen information literacy skills; select, organise and facilitate access to information in a variety of formats; keep abreast of technological advancements and develop strategies to take advantage of them; plan, implement and administer computer based systems electronic databases



design and manage web sites; collaborate with classroom faculty computer specialists and instructional developers; contribute to effective teamwork among colleagues, and participate in the public relations efforts to promote and raise funds for academic libraries.

Since academic libraries at universities have historically been the go-to places for students, faculty members, and researchers looking for pertinent information, all of these activities take place there (Ozioko, 2007). Ozioko claims further that academic libraries act as both a clearinghouse for published knowledge and a middleman for collecting materials from all around the world. University education's primary and essential department of service delivery is the university library, which was created to address students' demands for information resources for study, research, and instruction (Pandey, 2015). To this end, the application or incorporation of online information resources for effective services delivery in university libraries by librarians are quite expedient and needful. However, no one can deliver what he or she does not have.

### **Methodology**

The data collected for this study was analysed using the population mean ( $\bar{x}$ ) statistics and standard deviation to answer research questions. To a good extent it was a comparative study analysis. The cut off score for decision making was obtained by summing the value in the rating (1+2+3+4=10) and divided by 4 to obtain 2.50. Any mean value ranked 2.50 and above was positive, that is; agree, otherwise it was negative i.e. disagree. In interpreting the items with response mode, very high extent, low extent and very low extent, the real limit of numbers was used: 1.0-1.49 (Very low extent), 1.50-2.49 (low extent), 2.50-3.49 (High extent), 3.50-4.00 (Very high extent). The null hypothesis was tested using t-Test statistical tool to test hypothesis about the difference between variables. If the t-Test calculated value was less than the t-Test table value at 0.05 level of significance, that means that there was significant difference between the two variables the null hypothesis was rejected, but if otherwise, the null hypothesis was accepted.

### **Data Analysis and Presentation of Results**

A total of 174 copies of the questionnaire were administered to the respondents in the public university libraries South-East Nigeria. Out of the 174 copies administered, 157 were

filled and returned, representing 90% return rate. The results of the data analyses are presented based on the research questions and the hypothesis.

**Research Question One:** What are the types of online information resources utilized by public university librarians for effective services delivery in public university libraries in South-East, Nigeria?

**Table 1: Mean ratings on types of online information resources utilized for effective service delivery by librarians in the public university libraries.**

S/N	Items	State		Federal		Grand X	Remarks
		X	SD	X	SD		
1.	Online/E-journals	2.93	.940	3.53	.624	3.23	A
2.	Online/E-books	2.79	.995	3.47	.717	3.13	A
3.	CD-ROM Databases	2.79	.876	2.89	.781	2.84	A
4.	Online Databases	2.84	.994	3.06	.745	2.98	A
5.	Integrated Library Management Software	2.43	.959	2.88	.781	2.66	A
6.	Internet/Browsing (LAN/WAN)	2.75	1.175	3.41	.618	3.08	A
7.	Online Public Access Catalog (OPAC)	2.36	1.026	3.29	.686	2.83	A
8.	World wide web (www)	3.14	.970	2.88	.781	3.01	A
9.	Online/E-newspapers	2.46	.962	2.71	.985	2.59	A
10.	Online E-conference proceedings	2.14	.970	2.59	.795	2.37	D
11.	E-standards	1.64	.951	2.18	.805	1.91	D
12.	E-patents	1.64	.951	2.29	.701	1.97	D
13.	E-manuscripts & Special collections	2.04	.781	2.29	.935	2.17	D
14.	E-Theses	2.76	.745	2.71	.799	2.74	A
15.	The social media	3.04	.781	2.64	.993	2.96	A
16.	Online tutorials	2.25	.618	2.88	.621	2.33	D
17.	ONIX (Online Information Exchange)	1.75	.686	2.41	.951	2.05	D
18.	OLUC (Online Union Catalogue)	1.71	.781	2.35	.612	2.06	D
19.	OCLC (Online Computer Library Centre)	1.86	.985	2.41	.707	2.17	D
20.	POD (Print-on-demand)	2.11	.795	2.47	.810	2.26	D
21.	Sharper Romeo	1.61	.805	2.41	.827	1.81	D
	<b>Grand mean</b>	<b>2.62</b>		<b>2.59</b>		<b>2.61</b>	<b>A</b>

Where X= Mean, SD - Standard deviation, A = Accept, D= Disagree

The data in Table 1 show that 11 out of 21 types of online information resources are utilized by librarians in the public universities in South-East, Nigeria. The 11 items had acceptable mean score of 2.50 and above. These are: online/E-journals, online/E-books, Internet browsing (LAN/WAN), World Wide Web (www), online databases, social media, and CD-ROM databases. It implies that the major types of online information resources utilized by librarians in the public university libraries in South-East include the ones mentioned and stated above.

On the other hand, data in Table 1 also show that 10 out of 21 types of OIRs itemized are not utilized by the librarians. These items had mean scores below 2.50 and were not accepted. These are: online E-conference proceedings, E-standards, E-patents, E-manuscripts and special collections, online tutorials, Online Information Exchange (ONIX), Online Union Catalogue (OLUC), Online Computer Library Centre (OCLC), Print-On-Demand (POD) and Shaper Romeo. It implies that the online resources not utilized by librarians in the public universities in South-East include the ones mentioned above. The grand mean obtained across the federal and state universities was 2.61. This implies that the librarians in the federal and state universities utilized various types of online information resources for effective services delivery.

**Research Question Two:** What extent is the awareness of public university librarians on the type of services that online information resources are utilized for effective services delivery in public university libraries in South-East, Nigeria?

**Table 2: Mean ratings on the extent of awareness of various types of services that online information resources are utilized for effective services delivery by librarians in the public university libraries**

S/N	Items	State		Federal		Grand X	Remarks
		X	SD	X	SD		
1.	Ordering of information resource materials (Acquisition services)	3.11	.956	3.12	.857	3.12	HE
2.	Accessioning of acquired information materials	3.00	.903	2.82	.883	2.91	HE
3.	Cataloguing & Classification of information resource materials	3.21	.876	3.00	.935	3.11	HE
4.	Reference and referral services	2.89	1.066	2.79	1.074	2.84	HE
5.	Registration & regulation of users and material resources (circulation services)	3.25	.752	2.82	.857	3.04	HE
6.	Current Awareness Services (CAS)	3.00	.903	3.12	.748	3.06	HE
7.	Selective Dissemination of Information Services (SDIS)	3.00	.981	3.06	.748	3.10	HE
8.	Charging & discharging book materials	3.25	.928	2.94	.828	2.82	HE
9.	Labeling of books	3.04	1.170	2.60	.985	3.15	HE
10.	Circulation and borrowers management	3.36	.826	2.94	.996	2.93	HE
11.	Serials management	3.21	.957	2.65	.786	2.91	HE
12.	Books reservation	3.00	1.089	2.82	.809	2.32	LE
13.	Camera services (video & photographs)	2.39	1.066	2.24	.903	2.43	LE
14.	Sound recordings	2.50	1.072	2.35	1.057	2.43	LE
15.	Institutional repositories (IR) services	2.68	1.124	2.18	.951	2.43	LE
16.	Funds accounting	2.36	.989	2.71	1.160	2.54	LE
17.	Bibliographic services	2.75	1.041	2.82	.883	2.79	HE

18.	Resource sharing & inter-library loaning	2.68	1.056	2.53	1.068	2.61	HE
19.	Indexing, abstracting & documentation services	2.89	.786	2.53	.857	2.71	HE
	<b>Grand mean</b>	<b>2.69</b>		<b>2.72</b>		<b>2.70</b>	<b>HE</b>

X = Mean, SD = Standard deviation, LE = Low Extent, HE = High Extent

The data in Table 2 reveal that 14 out of 19 items were rated high extent of awareness of the various types of service that online information resources are utilized for effective delivery. The state and federal universities obtained a group mean of 2.69 and 2.72 respectively. This implies that the federal and state universities to a high extent are aware of the various types of services that online information resources are utilized for effective service delivery. This implies that to a high extent, the university librarians are aware of ordering and utilisation of information resource materials (acquisition services), accessioning of acquired information materials, cataloguing and classification of information resource materials, reference and referral services, registration and regulation of users and material resources, current awareness services, selective dissemination of information services, charging and discharging book materials among others.

On the other hand, Table 2 revealed that 5 out of 19 items were rated low extent of awareness. These items are: books reservation, camera services (videos and photographs), sound recordings, institutional repositories services and funds accounting.

**Research Question Three:** What are the challenges militating against online information resources utilisation for effective services delivery in public university libraries in South-East Nigeria?

**Table 3: Mean ratings on the challenges in the utilisation of online information resources for effective service delivery in public university libraries in South-East, Nigeria**

S/N	Items	$\bar{X}$	State SD	$\bar{X}$	Federal SD	Grand X	Remarks
1.	Low bandwidth/slow internet connectivity	3.68	.472	3.29	.772	3.48	A
2.	Low level of ICT literacy skills	3.32	.612	3.18	.951	3.25	A
3.	Unwillingness of authorities of universities/heads of libraries to adopt utilisation of online information resources	3.18	.945	2.82	.809	3.00	A
4.	Lack of knowledge about online/internet platforms	3.25	.701	3.00	.935	3.13	A
5.	Aversion culture/natural disinterest in adopting new change and technology	3.25	.799	2.88	.993	3.07	A

6.	Lack of funds to undertake or undergo training on ICT literate	3.36	.621	3.18	.951	3.27	A
7.	Complexities of many and frequent changes of online databases and software packages	3.18	.612	3.00	.707	3.09	A
8.	Non-existence of software/online policies	3.29	.810	3.06	.827	3.75	A
9.	Unreliable electric power supply	3.50	.638	2.00	.935	3.75	A
	<b>Grand mean</b>	<b>3.32</b>		<b>3.57</b>			<b>A</b>

Where X= Mean, SD - Standard deviation, A = Accept, D= Disagree

The data in Table 3 show that all the 9 items measuring the challenges faced by librarians when using online information resources had mean cut-off above 2.50 for federal universities as well as state owned university. The group mean of 3.32 and 3.57 summarily indicate that respondents agree that enormous challenges are faced by them when using online information resources for both state and federal universities. These challenges are: Non-existence of software/online policies, Unreliable electricity power supply, low band width/slow internet connectivity, Lack of funds, Low level of ICT literacy skills, among others.

### Testing of Hypothesis

**Table 4: T-test analysis of mean difference between federal and state-owned public universities on types of online information resources utilized for effective service delivery**

Variable	N	$\bar{X}$	SD	Df	T	Sig	Decision
Federal	122	50.48	14.07				
				172	-3.421	.001	Reject Ho
State	52	57.73	9.01				

\* Significant at  $P < 0.05$

The result in Table 4 above reveals t-calculated value of -3.421 at  $df = 172$  where  $p < 0.05$ . This indicates that there is a significant difference between the mean score of librarians in federal and state-owned public university libraries on types of online information resources that are utilized for effective service delivery in public universities in South East, Nigeria. Hence the null hypothesis was therefore rejected. It implies that the State Universities utilize various types of the online information resources more than the federal Universities.

## **Conclusion**

Based on the objectives/research questions posed to guide this study, the following conclusions were drawn: There were numerous and various types of online information resources for effective services delivery in public university libraries and the librarians both in federal and state-owned universities were highly aware of them all. However, a little above the half of the online information resources were utilized by the librarians.

The challenges militating against the utilisation of online information resources for effective services delivery were the same all over with both the federal and state university librarians.

There was a significant difference between the federal and state public university librarians on the types of online information resources utilized for effective services delivery in public university libraries in South-East, Nigeria.

## **Recommendations**

The following recommendations are proffered for good knowledge and utilisation of online information resources for effective services delivery in the university libraries of public universities.

1. University librarians should endeavour to get sound training/knowledge of the various types and application of online information resources for effective services delivery in the university libraries.
2. Public university librarians (federal and state owned) should synergize efforts on training and interactions on ways to surmount the challenges facing the utilisation of online information resources for effective services delivery in public university libraries.
3. Proper funding of public university libraries should not be undermined for whatever reasons by the authorities. This will go a long way to addressing the issue of low bandwidth and poor Internet connectivity in the area.
4. Compulsory e-library training workshops should be entrenched in the program careers of the public university librarians.

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