



Vol. 5, Issue: 2021

Article

ISSN: 2312-2668

[International Journal of Information Management Sciences \(IJIMS\)](#)

December 31, 2021

Provision and Utilization of Online Information Services in Federal Polytechnic Libraries in North-Eastern States of Nigeria

Madalla Ajemasu¹

Dr. Sani Murtala Ridwan

IJIMS have Open Access policy. This article can be downloaded, shared, and reused without restriction, as long as the original authors are properly cited.

IJIMS applies the [Creative Commons Attribution 4.0 International License](#) to this article.

¹ Corresponding Author

International Journal of Information Management Sciences (IJIMS) - <http://ijims.org/>

Provision and Utilization of Online Information Services in Federal Polytechnic Libraries in North-Eastern States of Nigeria

Madalla Ajemasu

Department of Library and Information Science
Ahmadu Bello University, Nigeria
madallaajemasu@gmail.com

Sani Murtala Ridwan (Ph.D)

Department of Library and Information Science
Ahmadu Bello University, Nigeria
sanimridwan@gmail.com

Abstract:

The paper discusses the provision and utilization of online information services in federal Polytechnic libraries in North East of Nigeria. To realize this, three research objectives were formulated which are to determine: the online information services provided in Federal Polytechnic Libraries in North-East Nigeria, The extent of utilization of the online information services in Federal Polytechnic Libraries in North East of Nigeria, and the extent of satisfaction with online information services provided in Federal Polytechnic Libraries in North East of Nigeria. The descriptive survey research design was used in this study. Simple Random Sampling technique, 269 registered library users were used as a sample of the study. For this work questionnaire was used as an instrument for data collection. The data was collected and analyzed using descriptive statistics of frequencies and percentages SPSS version 23.0. The study found that: online information services provided in federal polytechnic were: document search services, document delivery services, online reference services, instant messaging, social networking services, online current awareness services, and email services. The study reveals that online reference services, instant messaging and current awareness services are the most utilized services in Federal Polytechnic Mubi. While the most utilized online information services in Federal Polytechnic Bauchi are document search services, instant messaging, and social networking. The online information services in Federal Polytechnic Damaturu and Bali are underutilized. The study also reveals that the library users from all Polytechnics are not satisfied with the online information services provided to them.

Keywords: Provision; Utilization, Online Information Services; Libraries

Introduction

Libraries in the Nigerian educational system were found to be relevant which cannot be overestimated. Libraries are now related to teaching and instruction; education is a key factor for any social change, development of physical infrastructure, and intellectual creation,

which drastically affects the well being of social life, political stability, economic upward, scientific approaches, and technological changes (Daluba & Maxwell, 2013). Academic libraries serve as a place whereby intellectual activities carry out in tertiary institutions in Nigeria. Tertiary institutions will not be realized the optimum

functions unless academic libraries served as well repositories of current and relevant information resources managed by experienced library professionals. According to Dibua, (2000), explains that academic library is a strong force of educational machinery that helps library users to carry out his/her academic or professional tasks to achieve a stated objective. With the relevance of skillful librarians, information, and services, academic libraries are of assistance to tertiary institutions to accomplish their set objectives in terms of training manpower for library and institutional development.

Polytechnic libraries, agreeably, maintain the position that setup the polytechnic setup which provides adequate information services required to sustain and promote the intellectual activities of such institutions. According to Nwalo (2001), polytechnic libraries have the core objectives of support for the academic literature, research activities, and faculty programs of a particular institution. The library serves as an additional room for teaching and learning activities in polytechnics by accommodating students in beautiful surroundings environment for personal advancement and access to various information resources in competing with other academic institutions with functional library services.

Omekwu and Eruvwe (2014), in agreement with the services provided in polytechnic libraries that keep the students visiting the library which include online information services, and digital information services which drastically increased over the last decade. A reasonable amount was spent on online information services in many libraries to support library services and the

information needs of student/library users. According to Bhart (2009), scores of libraries were spending a greater proportion of their annual budget on online library resources and services. Moreover, these services have improved the student's acceptance of library services and the quality of education at large (Adedeji, 2000). However, despite the efforts of library management and polytechnic authority, it has been observed by the researcher that online information services are been underutilized. This indicates that the efforts made to improve the information services to the library users need to be investigated, in light of this, this study, therefore, seeks to access the extent of provision and utilization of online information services in the polytechnic libraries, North Eastern, Nigeria.

Statement of the Problem

The objectives of Nigerian polytechnic libraries were saddled on their parent institutions whereby library policy and annual budgetary allocation was handled by the library and institutional management; as such a reasonable amount was allocated annually for the provision of online information services in the polytechnic libraries. According to Bhart (2009) and Ogunmoded & Emeahara, (2010), Polytechnic libraries spent a greater proportion of their annual budget on the provision of online information services. It is, however, discouraging that despite all these efforts, the services provided online information services are been underutilized. This unattractive trend constitutes a serious threat to the success of the objectives of polytechnic libraries in Nigeria. Could that be a result of inadequate provision of online

information services? Or lack of competent skills in respect to users in utilizing online information services? Therefore, the bottom line of this study is to investigate the provision and utilization of online information services as well as the extent of users' satisfaction with the online information services in Federal Polytechnic Libraries in North-East Nigeria.

Objectives of the Study

The objectives of this study are to determine:

1. The online information services are provided in Federal Polytechnic Libraries in North-East Nigeria.
2. The extent of utilization of the online information services in Federal Polytechnic Libraries in North-East Nigeria
3. The extent of satisfaction with the online information services provided in Federal Polytechnic libraries in North-East Nigeria.

Review of Related Literature

Online information services are the services rendered to the library patrons through electronic means in a library application portal or worldwide internet. According to Madhusudhan and Nagabhusanam, (2012), maintain that Internet services are the services attached to various online information organizations and online library information services in a variety of forms organized according to subject areas through the web or library application system. Onohwakpor and Adogbej (2011) explain the internet as network-mediated services provided by information centers. With the presence of online information services, information users can get hold of online information

services whenever in need without limit or boundary. Scholarly databases can be accessed 24 hours on all 7 weekdays unless that of scheduled maintenance or system failures from anywhere on or off-campus. Users can have access to e-magazine, e-books, e-journals, and many more or make inquiries on whatsoever they need. Customers now reach the library personnel through e-mail or phone when the library is closed. Integrated Library Management Systems such as KOHA is now in place in some polytechnic libraries for making better use of online information services. Online information services have changed the way information services are handled, most services are now expanded and redesigned to suit the 21st-century library services. Libraries increase series of services which include multimedia due to the diverse audience than ever before.

Gerolimos and Konsta (2011), identified online information services as RSS, Instant Messaging, Streaming Media, Weblogs, Tags, and Social networks such as Facebook, Twitter, and YouTube. Other services according to Mirza and Mahmood, (2009), include Web-based user education tools, virtual tours, etc. Chen, (2011), said online information services range from online bibliographic instructions, computerized library catalogs, distance learning services, e-databases, instant messaging services, interlibrary loan and document services, ready references, virtual classrooms, virtual references. Salama and Shawish (2012), have mentioned various types of online information services which include: Databases, Directories, Search Engines OPAC, Gateways, indexes, and Portals. More libraries have moved towards

providing these services using web-based technologies.

An effort was made in Nigeria is related to ICT and internet services which are the steam engines for online information delivery but little was reported in the literature (Womboh and Abba, 2008). Gbaje (2007), carried out similar research on the Provision of Online Information Resources and Services in Nigerian Academic Libraries. The study revealed that there was a shortage of web technologies skilled librarians, poor information technology infrastructure, and high cost of equipment which were among the challenges that hindered the Nigerian libraries from providing online information services.

Gakibayo et al. (2013), lamented that for the polytechnic students to utilize the growing range of online information services ICT skills are necessary to exploit them in the practical information technology era.

Satisfying library users' information needs is the prime concern of every modern library. The library and information professionals will always seek to satisfy the information needs of every library user; no matter the extent it will take them. It is this quest to satisfy library users' information needs that have resulted in the application of Information and Communication Technologies (ICTs) in the routine operations of 21st-century libraries. As Haneefa (2007), puts it, libraries and information centers have continually used online information resources and services in recent years to satisfy the sundry information needs of their users.

Methodology

The study adopted quantitative research method using descriptive survey research design. Oyedum, (2011) states that surveys are using extensively in obtaining statistical and mathematical information to assess attitudes and characteristics of a wide range of subjects and can be useful when a researcher wants to collect data on phenomena that cannot be directly observed. The wisdom for choosing the survey method was based on the notion that the survey research method is used to seek the opinions of individuals on a particular subject, particularly the one under study. The total population for this study is 900 while sample size is 269 which were determined using Morgan's Table of Sample Size based on 95% confidential level and 5% confidential interval (margin error). A Simple Random Sampling technique was used for this study to select the 269 from populations. A self-constructed structured questionnaire was used to collect requisite data from the target population which is subjected to statistical analysis. SPSS version 23.0 statistical software package was used to perform appropriate statistical analysis. The Data gathered were analyzed using descriptive statistical tools namely frequencies, percentages, mean and standard deviation. Also, given the four-points rating scale, the calculated mean is 2.50 as such any item with a mean score of 2.50 and above will be considered as positive while anything less than 2.50 will be considered negative.

Result and Discussion

As shown in Table 1 below, the research was conducted on sample size of 269 respondents out of which 258 respondents completed and returned the

questionnaires making a response rate of 96% While 11 questionnaires were not returned which represent 4%. The response rate corroborates Mugenda and Mugenda

(2003), who states that, a response rate of 50% and above is a good for statistical reporting.

Table 1: Response Rate

Questionnaire Distributed	Questionnaire Returned	Questionnaire Not Returned
269 (100%)	258 (96%)	11 (4%)

Source: Field Survey, 2018

Demographic Information

The result of distribution of the respondents by Polytechnics as presented in table 2 below revealed that out of 258 (100 %) respondents, 63 (24.2 %) were from

Federal Polytechnic Mubi, 69 (27 %) from Federal Polytechnic Bauchi, 62 (24 %) from Federal Polytechnic Damaturu and 64 (24.8 %) from Federal Polytechnic Bali.

Table 2: Demographic Information of Respondents

Qualifications/Status	POLYTECHNICS				TOTAL
	FP MUBI	FP BAUCHI	FP DAMATURU	FP BALI	
ND	23 (9%)	28 (11%)	20 (8%)	24 (9%)	95 (37%)
HND	24 (9%)	22 (9%)	23 (9%)	22 (9%)	91 (36%)
PG	7 (3%)	9 (3%)	8 (3%)	8 (3%)	32 (12%)
Lib/Staff	3 (1.2%)	3 (1.2%)	3 (1.2%)	3 (1.2%)	12 (4.8%)
Lecturers	3 (1.2%)	5 (2%)	6 (2%)	4 (1%)	18 (6.2%)
Adm. Staff	3 (1.2%)	2 (1%)	2 (1%)	3 (1.2%)	10 (4.4%)

Total	63	69 (27%)	62 (24%)	64 (24.8%)	258 (100%)
	(24.2%)				

Key: FP = Federal Polytechnic. Source: Field Survey, 2018

Research Question 1: What are the Online Information services provided in Federal Polytechnic Libraries in North East Nigeria?

Table 3: Available Online Information Services in the participating Polytechnics

S/ N	Online Information Services	Availability			
		FP Mubi	FP Bauchi	FP Damaturu	FP Bali
1	Document search services	✓	✓	✓	✓
2	Document delivery services	✓	✓	✓	✓
3	Online Reference services	✓	✓	✓	✓
4	Podcasting	✗	✗	✗	✓
5	Wikis	✓	✗	✗	✓
6	Instant Messaging	✓	✓	✓	✓
7	Social Networking	✓	✓	✓	✓
8	Current awareness services	✓	✓	✓	✓
9	Email services	✓	✓	✓	✓
10	OPAC	✗	✓	✓	✗

Key: FP = Federal Polytechnic Source: Field Survey, 2018

Table 3 above shows that all the Federal Polytechnics in North East Nigeria Provide, Document search services, Document delivery services, online Reference services, Instant Massaging, Social Networking Services, Online current awareness services and Email services. In addition to the services provided by all the

Polytechnics, Federal Polytechnic Bali provide Podcasting services and wikis while Federal Polytechnic Mubi also provide Wikis services. On the other Hand, Federal Polytechnic Bauchi and Damaturu in addition to the services provided by all the Polytechnic provide OPAC services.

Research Question 2: To What Extent Do Users of Federal Polytechnic Libraries Utilize Online Information Services?

Table 3a: Extent of utilization of online services in Federal Polytechnic Libraries

S/N	Services	HU	U	MU	NU	Mean	St. Dev	Decision
-----	----------	----	---	----	----	------	---------	----------

1	Document search services	39	64	57	98	2.83	1.144	Positive
2	Podcasting	109	59	50	40	2.08	1.114	Negative
3	Wikis	79	56	68	55	2.37	1.079	Negative
4	Document delivery services	72	53	52	81	2.56	1.164	Positive
5	Online Reference services	43	89	81	55	2.56	1.054	Positive
6	Instant Messaging	76	79	52	51	2.31	1.045	Negative
7	Social Networking	51	77	77	53	2.52	0.97	Positive
8	Current awareness services	51	64	72	73	2.65	0.973	Positive
9	Email services	37	35	28	33	2.41	0.936	Negative
10	OPAC	40	14	33	29	2.01	1.305	Negative

Keys: Highly Utilized = HU; Utilized=U; Moderately Utilized = MU; Not Utilized= NU

From the table 3 above, the findings revealed the utilization of online information services in Federal Polytechnic libraries. Base on the information obtained, users utilized online information services in respect to Document search services (M=2.83, SD=1.144) with more than mean 2.50 score benchmark (positive), Podcasting (M=2.08, SD=1.114), Wikis (M=2.37 SD=1.079), Document delivery services (M=2.56 SD=1.164), Online Reference services (M=2.56 SD=1.054), Instant Messaging (M=2.31 SD=1.045), Social Networking (M=2.52 SD=0.97), Current awareness services (M=2.65 SD=0.973) Email services (M=2.41 SD=0.936), and

OPAC (M=2.01 SD=1.305) with less than mean score 2.50 benchmark (Negative). The result clearly indicates that e-project, e-reference materials, e-books, e-thesis/dissertation and online database are positively utilized in regards to the mean 2.50 score benchmark and decision base on the higher score recorded on such online information resources. This implies that all the users of federal polytechnic libraries utilized these resources to some extent. In respect to e- Podcasting, Wikis, Instant Messaging, e-mail services, and OPAC under-utilization negatively reported with less than mean 2.50 score benchmark, this under-utilization could be due to the inadequate provision to such information

services in a large scale, or due to the quality of the services or due the techniques attached to the retrieving of such online services. Online services have become increasingly available through the Internet and, thereby, directly to the end user. Materials can be read online or downloaded

in a variety of formats, including PDF, Microsoft reader, and html. From the “collection” point of view, providing identification and access to the free sites brings with it a number of issues (Cotter, 2002).

Table 4d: Extent of satisfaction with online services in Federal Polytechnic Libraries

S/N	Services	VS	S	MS	NS	Mean	St. Dev	Decision
1	Document search services	73	72	44	51	2.65	0.973	Positive
2	Podcasting	99	59	60	40	2.08	1.114	Negative
3	Wikis	79	56	68	55	2.37	1.079	Negative
4	Document delivery services	72	81	52	53	2.56	1.164	Positive
5	Online Reference services	77	53	77	51	2.52	1.054	Positive
6	Instant Messaging	76	79	52	51	2.31	1.045	Negative
7	Social Networking	55	81	89	43	2.56	0.97	Positive
8	Current awareness services	98	57	64	39	2.83	1.144	Positive
9	Email services	30	35	28	40	2.41	0.936	Negative
10	OPAC	43	14	30	29	2.01	1.305	Negative

Keys: Very Satisfied = VS; Moderately Satisfied= MS; Under Satisfied= US; Not Satisfied= NS

From the table 3 above, the findings revealed the utilization of online information services in Federal Polytechnic libraries. Base on the information obtained, users satisfied with the online information services in respect to Document search services (M=2.65 SD=0.973) with more than

mean 2.50 score benchmark (positive), Podcasting (M=2.08, SD=1.114), Wikis (M=2.37 SD=1.079), Document delivery services (M=2.56 SD=1.164), Online Reference services (M=2.52 SD=1.054), Instant Messaging (M=2.31 SD=1.045), Social Networking (M=2.56 SD=0.97), Current awareness services (M=2.83

SD=1.144) Email services (M=2.41 SD=0.936), and OPAC (M=2.01 SD=1.305) with less than mean score 2.50 benchmark (Negative). The result is on agreement with the extent of utilization of information services which most of the items that reported in the positive utilization are the same resources being satisfied by the users. This in agreement with Bhatia & Vohra, (2007) who support that satisfaction of online information resources and service such as reference desk services, database services, e-journals always depend on the well equipped with Internet facility so some factual or other information can be delivered quickly to the users. Today libraries are providing various nodes of online information service for users and they can come and search or browse their needed information which can give better access to a wider range of information, cost saving as the e-services is bought through consortiums, better utilization of users' time and equal access to e-resources (Bhatia & Vohra, 2007)

Discussion of Findings

Findings from the study shows that all the Federal Polytechnics in North East Nigeria Provide, Document search services, Document delivery services, online Reference services, Instant Messaging, Social Networking Services, Online current awareness services and Email services. In addition to the services provided by all the Polytechnics, Federal Polytechnic Bali provides Podcasting services and wikis while Federal Polytechnic Mubi also provides Wikis services. On the other hand, Federal Polytechnic Bauchi and Damaturu in addition to the services provided by the entire Polytechnic provide OPAC services.

This result therefore, is in an agreement with Nnadozie, Aniebo and Chukwueke, (2017), on how online information services makes services easier, which clearly indicated that online information services (e-services) make it possible for library patrons to be served from remotely-located databases through interactive communication with the help of computers and communication channels. The users of these services can access the databases directly or via a vendor (supplier of online services).

The findings also reveal that Document search services, Document delivery services, Online Reference services, Social Networking, and Current awareness services are the most utilize services in Federal Polytechnic Libraries. The under-utilization of the some of the services in the polytechnic could be because of lack of awareness and the convenience associated with such services by the users. The result is in agreement with Tella and Ojo (2012) who observed that of lack of adequate awareness of the availability of this library services, and online information centers that will suit the information need of the users can attribute to negative impact the services.

The result reveals that the library users from the surveyed Polytechnics are only satisfied with the online information services that most utilize which are Document search services, Document delivery services, Online Reference services, Social Networking, and Current awareness services. This result is in contrast to a study by Biradar, Kumar and Mahesh (2009), who reported that undergraduate students expressed satisfaction with the following electronic services; online 57(56.43%), Internet 50(49.50%) and CD-ROM 54(53.46%). The researchers concluded that

the expression of dissatisfaction may be attributed to lack of awareness and inconveniences of use. This result is supported by the findings of Ivwighrehweta (2013) in a study on the application of ICT on academic library operations and services in Nigeria, which opined that library users are satisfied with the provision of e-reference services and other ICT services by users of university libraries in carrying out their research work.

Conclusion and Recommendations

Online information services have improved the quality, diversity and accessibility of electronic information resources to the heterogeneous user communities. The emergence of online information services has considerably widened access to library resources beyond the immediate location of any library with the requisite technologies. Whereas libraries in the advanced Western societies have embraced and implemented electronic-driven information services for their users. The result of this study has shown that Nigerian Polytechnics are still at the rudimentary stages. The online information services are either insufficient or are completely lacking. This an unfortunate state of affair. The following recommendations are based on the major findings of this study:

1. It is recommended that Polytechnic Libraries should provide adequate online library services that would meet the information needs of their users.
2. Effort should be made by the Polytechnic Libraries to improve upon the already existing online information services as this will further enhance teaching, learning

and research activities of their institution.

3. There should be a holistic user education programme designed to equip library users with the prerequisite skills on computer application, internet access, networking, database searches and information retrieval by the Polytechnic Libraries. The essence of doing so; is to ensure that library users can optimally utilize the online library services.
4. The cost of accessing the online information services by students should be highly subsidized by the Polytechnic Libraries, in order to encourage the use of the online information services.

References

- Abubakar, Bappah Magaji (2011). Academic Libraries in Nigeria in the 21st Century. *Library Philosophy and Practice*. Available at ir.inflibnet.ac.in/bitstream/1944/1418/1/58.pdf
- Adedeji, S. O (2000). Resources Adequacy and Academic Performance in Osun State Vocational Secondary Schools. *Afri.J. Edu. Manage.* 5 (182).
- Ani, O. E. (2010). Internet Access and Use: A Study of Undergraduate Students in Three Nigerian Universities. *The Electronic Library* 28 (4).
- Bhart, M. (2009). Increasing the discovery and use of e-resources in University Libraries. <http://www.inflibnet.ac.in/caliber2009/caliber>.
- Biradar, B. S., Kumar, P. D. and Masheh, Y. (2009). Use of Information Sources and Services in

- library of agriculture Science College, Shimoga: a case Study. *Annals of Library and Information Studies* Vol. 56, June.
- Chen, Yu-Hui (2011). Undergraduates' Perceptions and Use of the University Libraries Web Portal: Can Information Literacy Instruction Make a Difference? Proceedings of the American Society for Information Science and Technology Volume 48, Issue 1.
- Chowdhury, G., and Margariti, S. (2004). Digital reference services: a snapshot of the current Practices in Scottish libraries. *Library Review*, 53(1).
- Daniel, J. O (2014) Issues in Setting up E-Library in Nigeria. Paper Presented at the Tetfund E-Library Training Workshop for Colleges of Education in Nigeria, October 20th -31st.
- Daluba, N. E. and Maxwell, C. E. (2013). Effect of social media on the use of academic library by undergraduate students in tertiary institutions: A case study of Kogi State University, Anyigba. *Academic Research International*, 4(5).
- Dibua, E. O. (2000). In Okeke, I. E. (Eds). *The Library as a Research Institution*. Enugu: Elite Publication Center.
- Dhamdhare, S. Namdev, Smet, Egbert De, and Lihitkar, A. Ramdas (2017). Web-Based Bibliographic Services Offered by Top World and Indian University Libraries: A Comparative Study. *International Journal of Library and Information Services* Volume 6 Issue 1.
- Edem, U. S. & Edem, N. B. (2002). Organization and utilization of reference resources in the University of Calabar Library. *African Journal of Education and Information Management*, 4(1), 95- 101.
- Etim, F.E. (2006). Resource sharing in the Digital Age: Prospects and problems in African Universities. *Library Philosophy and Practice*, 9 (1).
- Ezeala, L. O. & Yusuff, E. O. (2011). User satisfaction with library resources and services in Nigerian agricultural research institutes. *Library Philosophy and Practice*.
- Etim, F. E (2006) Resource Sharing in the Digital Age: Prospects and Problems in African Universities. Available at [Http://digital Commons. Unl.Edu. Lipphlprc/98](http://digitalcommons.unl.edu/lipphlprc/98).
- Fatoki, O.C. (2004). Library Automation in Nigeria the Kenneth Dike Library Experience. Lagos.
- Gakibayo, A et al., (2013). Electronic Information Resources Utilization by students in Mbarara University Library. *Library Philosophy and Practice*.
- Gbaje, Ezra Shiloba (2007). Provision of Online Information Services in Nigerian Academic Libraries. *Nigerian Libraries: Journal of Nigerian Library Association*. Vol. 40.
- Gerolimos, Michalis and Konsta, Rania (2011). D-Lib Magazine. Volume 17, Number 7/8 Libraries. *Nigerian Libraries: Journal of Nigerian Library Association*. Vol. 40.
- Goulding, A. 2006. *Public Library in the 21st Century: Defining Services and debating the future*. U.k: Ashgate Publishing Company.
- Haneefa, K. M. (2007). Use of ICT based resources and services in special

- libraries in Kerala. *Annals of Library and Information Studies*, 54, 23 – 32.
- Ijiekhuamhen, O. P., Aghojare, B. and Omoosekejimi, A. F. (2015). Assessing users' satisfaction on academic library performance: a study. *International Journal of Academic Research and Reflection*, 3(5).
- Ismond, K. P., and Shiri, A. (2007). The medical digital library landscape. *Online Information Review*, 31(6).
- Jacobs, L (2013) ICT Library Services in Nigerian Academic Institutions. Paper Presented At Workshop On ICT Library Services In Nigerian Tertiary Institutions By Regenesys Business School, Johannesburg 27th Septembers.
- Madhusudhan, M. and Nagabhushanam, V (2012). Use of Web-Based Library Services in Select University Libraries in India: A Study. *International Journal of Library and Information Studies* 2(1).
- Mirza, Muhammad Sajid. And Mahmood, Khalid. (2009). Web-based services in University Libraries: a Pakistani perspective. *Library Philosophy and Practice*. Available at <http://www.webpages.uidaho.edu/~mbolin/mirza-mahmood.htm>.
- Motiang, I. P., Wallis, M & Karodia, A. M. (2014). An evaluation of user satisfaction with library services at the University of Limpopo, Medunsa Campus (Medical University of Southern Africa). *Arabian Journal of Business and Management Review*, 3(11), 41- 58.
- Nwalo, K. I. N (2003). Fundamentals' of Library Practice: A manual on library routines. Ibadan: Sterling Horden Publishers Ltd.
- Ogunmodede, T. A and Emeahara, E. N. (2010). The effect of library use education as a Course on Library patronage: A case study of LAUTECH library, Nigeria. *Library Philosophy and Practice*. Available @ <http://www.Unidaho.edu/~mbolin/ogunmodede-emeahara.htm>
- Omekwu, C. O. & Eruvwe, U. (2014). Application of Information and Communication Technology (ICT) in Delta State Polytechnic Libraries, Nigeria. *Journal of Applied Information Science and Technology*, 7(1).
- Ojedokun, Ayoku A. (2001). "Internet Access and Usage by Students of the University of Botswana". *African Journal of Library, Archival and Information Sciences*. Vol.11, no.2.
- Onohwakpor, Josephine Eruterio and Adogbeji, Benson Oghenevwogaga (2011) The Implications of Alireza Noruzi's Laws of the Web for Library Web-Based Services. Handbook of Research on Information Communication Technology Policy: Trends, Issues and Advancements.
- Salama, Maria and Shawish, Ahmed (2012). From the Classical to Cloud-Based Era Cairo, available at <https://www.igi-global.com/viewtitlesample.aspx?id=83499&ptid>.
- Sathe NA, Grady JL, and Giuse NB (2002). Print versus electronic journals: a preliminary Investigation into the effect of journal format on research Processes. *J. Med. Libr. .Asso.* 90 (2).

- Shuling, W. (2007). Investigation and analysis of current use of electronic resources in University Libraries. *Library management* 28 (1/2).
- Suleiman, S.B. and Katsetpor, S.A. (2007). Information Seeking Behavior of Health Sciences, University of Ghana. *Information Development*. 23 (63).
- Syed, Sajjad Ahmed. (2002). Managing change to enhance web-based services in the Arabian Gulf Libraries. *Online Information Review*.
- Unobe, E. S. (2015) Availability and utilization of on-line information sources and services in federal universities' medical libraries in north west geo-political zone of Nigeria. A thesis submitted to the postgraduate school, Ahmadu Bello University, Zaria in partial fulfillment of the requirements for the award of master of Library Science (MLS) Department of Library and Information Science, Faculty Of Education, Ahmadu Bello University, Zaria, Nigeria.
- Womboh, B.S.H. and Abba, T. (2008). The state of Information and Communication Technology (ICT) in Nigerian University Libraries: the Experience of Ibrahim Babangida Library, Federal University of Technology, Yola. *Library Philosophy and Practice*