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# **Awareness and Utilization of Electronic Information Resources for Research Output of Academic Librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria**

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### **Abstract**

The study investigated awareness and utilization of electronic information resources for research output of academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. The study was guided by three objectives and three research questions. The study adopted descriptive survey research design with a population of 54 academic librarians at Joseph Sarwuan Tarka University, Makurdi. The entire population was used as sample size as it was small and manageable. The instrument for data collection was a questionnaire structured and designed by the researchers and titled Questionnaire on Awareness and Utilization of Electronic Information Resources for Research Output of Academic Librarians (QAUEIRROAL). The questionnaire was distributed by the researchers and one

research assistant within the university for easy retrieval. Out of the 54 copies of questionnaire distributed, 46 copies were retrieved and certified suitable for the study. Data collected was then analyzed using Mean and Standard Deviation and presented in tables. The finding revealed that academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria are aware of the available electronic information resources and utilized these resources for research output to a high extent. The study discovered that there are challenges encountered by academic librarians in the utilization of electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. The study however recommended that the university management should create more awareness and ensure proper funding of the ICT department to encourage high level utilization of electronic information resources and that there should be training and retraining of academic librarians to create awareness and improve the utilization of electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

**Keywords:** Electronic Information Resources, Awareness, Utilization, Academic Output, Research Librarians, Library and Information Science

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## Introduction

The introduction and advanced use of information and communication technologies over the years has brought the digitalization, reformation and transformation of information resources into electronic information service system. This scenario has brought advances in computer and networking technologies which have introduced both new capabilities and interesting challenges in utilizing information resources. By the 21<sup>st</sup> century, information resources digitalization and the internet had revolutionized information utilization around the world. However, the utilization of electronic information resources does not take the place of printed resources but facilitates it through access to large stock of materials. According to Okorie, Nwokocha and Ibenne (2018), advancement in computer application to information processing has increased the emergence of electronic information resources in the world today. This development and emergence of the internet service has contributed to increased impact that information has on people by placing vast information resources at people's doorsteps.

Electronic information resources are information stored in electronic format in computer or computer related facilities such as CD-ROMs, flash drives, digital libraries or the internet. Ani (2013) defined electronic information resources as resources in which information is stored electronically and which are utilized through electronic systems and networks. Electronic information resource has become a sign of the modern age and is an invaluable tool for academic librarians to utilize and improve their research output. There is a paradigm shift for academic librarians with the advent of information communication technologies. With the advent of information and communication technology and electronic publishing, information that was available only in print materials are now available in electronic format. Emezie and Nwaohiri (2013) maintained that if academic librarians are to continue to make substantial contributions as information disseminators, they will have to understand and exploit information and communication technology infrastructure and emerging technologies to improve their research output. And in order to achieve this, they must be aware of the various electronic information resources and must be able to use them.

Awareness refers to the process of evaluating the degree to which individuals or organizations are in the know of something. Awareness determines the level of proficiency and familiarity that academic librarians have with electronic information resources as well as the extent to which they have knowledge of these resources being subscribed to. According to Onwueme and Lulu-Pokula (2017), awareness of electronic information resources provides valuable insights into the use of electronic resources among users. Awareness of electronic information is crucial in understanding the extent to which academic librarians are knowledgeable about the resources available.

Utilization is the actual putting of the acquired information resources into appropriate context. Abubakar and Mamman (2020) defined utilization as the action of making practical and effective use of the available electronic information resources by academic librarians for research purposes. Utilization has been defined as accessing information from electronic information resources and putting them into practical utilization to improve the research output of the academic librarians. Utilization of electronic information resources therefore depend absolutely on relevance to the academic or research need at hand. Electronic information resources are utilized for different purposes by different academic librarians. For academic librarians, research output forms one of the major reasons for utilization of electronic information resources.

Several studies have been carried out in the field of librarianship to prove awareness and utilization of electronic information resources. Owulabi, Idowu, Okocha and Ogundare (2016) in their study on utilization of electronic information resources by undergraduate students found out that internet services, E-mail services, OPAC, online databases, electronic databases, E-newspapers, E-magazines and cybercafés were the available electronic information resources often used by the undergraduate students. Their study discovered that inadequate power supply, poor network/internet connectivity and limited access to computer terminals were the challenges encountered by undergraduate students in accessing electronic resources. Yebowaah and Plockey (2017) study on awareness and use of electronic resources in university libraries revealed that 65% of users are aware of the availability of electronic information resources in the library. The study discovered inadequate library infrastructure, low internet bandwidth, and inadequately trained library staff were the major challenges confronting the use of electronic resources of the library.

Bamidele, Opeyemi, Idunila and Oluwafemi (2018) carried out a study on electronic resources as a panacea for research output of academic staff and discovered that majority of academic staff were able to access electronic information resources at their offices/Laboratory, Off campus and University library, academic staff frequently make use of e-resources for their research interest and also agreed that electronic resources contributed to their research output. Iroaganachi and Iuagbe (2018) also carried out a study on comparative analysis of the impact of electronic information resources use towards research productivity of academic staff in Nigerian universities. Their study revealed that the extent of electronic information resources use for research productivity was low and this affected their research output. Okorie, Nwakocho and Ibenne (2018) investigated influence of electronic information resources utilization on academic performance of students and found out that students used electronic information resources daily for academic purposes

such as helping them in completing their assignment and seminar papers. The study identified epileptic power supply and the cost of access as the main challenges faced by the students in the use of electronic information resources. The researchers suggested constant provision of electric power and reduction in the cost of accessing the internet as the possible solutions to the identified problems in the students' use of electronic information resources.

Fiwotofor, Dadzie and Adams (2019) in their study on publication output of professional librarians in public university libraries found out that their research output was low due to challenges such as lack of time and heavy workload, inflexible work schedules, and absence of formal monitoring programme. Igere (2020) conducted research on the influence of electronic information resources on publication output of librarians and found out that the publication output level of the librarians in the universities are low. Acheampong, Mingle, Smart and Kofi (2020) carried out research on investigating awareness of electronic resources by research scientists and found out that majority of the scientists used electronic information resources. However, some of the challenges to accessing the electronic information resources were poor ICT infrastructure and lack of skills in accessing the resources.

Sajene (2017) carried out research on access to and use of electronic information resources and discovered that the types of electronic information resources used by academic librarians are electronic mails (e-mails), search engines, websites, online public access catalogue (OPAC), electronic journals (e-journals), full text databases, institutional repositories (IRs) and compact disc-read only memory (CD-ROMs). Onmueme and Lulu-Pokula (2017) in their research on awareness and use of electronic information resources found out that academic staff utilizes electronic information resources to a high extent as they are aware of electronic information resources. Madu (2019) on evaluation of academic staff awareness, access and utilization of electronic information resources found out that there is high extent of awareness among academic staff and their extent of awareness has increased their extent of electronic information resources utilization.

The benefits of utilizing electronic information resources are numerous but there can be challenges that hinder utilization of these resources. One major challenge for academic librarians especially at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria is the digital divide, which refers to the gap between those who are aware of these resources and can effectively utilize them and those who do not. The availability of electronic information resources can also lead to increased awareness and improve utilization. It is therefore evident that effective utilization of these resources is paramount for quality research output. It is against this background that the study investigates awareness and utilization of electronic information resources for research output of academic librarians at Joseph Sarwuan Tarka university, Makurdi, Benue State, Nigeria.

## Statement of the Problem

The emergence of information and communication technology has brought about tremendous development and improvement in the activities of academic librarians in the universities. With this in view, it is expected that academic librarians should shift towards the utilization of electronic information systems to attend to the information needed for

their research output. The processes of conducting research utilizing electronic information resources are slightly different from print resources because the use of internet, network and power supply are involved. This is why adequate utilization of electronic information resources greatly depends on the level of awareness of these resources among academic librarians. Effective utilization of these resources will also, enhance the research output of academic librarians.

Despite the advent of electronic information resources, the researchers have observed that research output among academic librarians at Joseph Sarwuan Tarka university, Makurdi, Benue State, Nigeria have not witness significant improvement. Also, despite the seemly benefits of the utilization of electronic information resources for carrying out research, the researchers also observed from the study area that academic librarians do not have adequate research output. Could this be due to lack of awareness of electronic information resources that hindered utilization to enhance research output among academic librarian at Joseph Sarwuan Tarka university, Makurdi or could it be due to lack of utilization of the electronic information resources by academic librarians in the study area? It is on this basis that this study intends to investigate awareness and utilization of electronic information resources for research output of academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

### **Objectives of the Study**

The general objective of this study is to investigate awareness and utilization of electronic information resources for research output of academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. The specific objectives of this study are to:

- i. find out if academic librarians are aware of the available electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.
- ii. ascertain if academic librarians utilize the electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.
- iii. examine the challenges encountered by academic librarians in the utilization of electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

### **Research Questions**

The following research questions were raised to guide the study:

- i. To what extent are academic librarians aware of the available electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria?
- ii. To what extent does academic librarians utilize the electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria?
- iii. What are the challenges encountered by academic librarians in the utilization of electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria?

## Methodology

The study adopted descriptive survey research design with a population of 54 academic librarians at Joseph Sarwuan Tarka University, Makurdi. The total population was used as sample size as it was small and manageable. The instrument for data collection was a questionnaire structured and designed by the researchers and titled Questionnaire on Awareness and Utilization of Electronic Information Resources for Research Output of Academic Librarians (QAUEIRROAL). The questionnaire was distributed by the researchers and one other research assistants within the university for easy retrieval. Out of the 54 copies of questionnaire distributed, 46 copies were retrieved and certified suitable for the study. Data collected was then analyzed using Mean and Standard Deviation and presented in tables.

## Results and Discussion

The results of this study are presented according to corresponding research questions.

### Research Question One

To what extent are academic librarians aware of the available electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria?

**Table 1: Extent of awareness of available electronic information resources by academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria (n = 46)**

S/N	ITEM STATEMENT	Mean	SD	Rank	Decision
1	E-Books	3.09	1.07	4 <sup>th</sup>	VHE
2	E-Research Reports	2.22	1.23	14 <sup>th</sup>	LE
3	E-Journals	3.17	1.10	1 <sup>st</sup>	VHE
4	E-Magazines	3.07	1.02	6 <sup>th</sup>	VHE
5	E-Reference materials	2.78	1.15	12 <sup>th</sup>	HE
6	E-Government documents	3.13	0.98	3 <sup>rd</sup>	VHE
7	Indexing Databases	2.83	1.12	11 <sup>th</sup>	HE
8	Web Public Access Catalogue (WebPAC)	3.02	1.04	8 <sup>th</sup>	VHE
9	Online Public Access Catalogue (OPAC)	3.09	0.98	5 <sup>th</sup>	VHE
10	E-Manuscripts	3.04	0.97	7 <sup>th</sup>	VHE
11	E-pre-Print	2.13	1.15	15 <sup>th</sup>	LE
12	CD ROM	2.78	1.21	13 <sup>th</sup>	HE
13	E-Newspapers	3.15	1.01	2 <sup>nd</sup>	VHE
14	E-Lecture Note	3.02	1.04	8 <sup>th</sup>	VHE
15	Abstracting Database	2.91	1.15	10 <sup>th</sup>	HE
	<b>Cluster Mean</b>	<b>2.90</b>	<b>-</b>	<b>-</b>	<b>HE</b>

Finding in Table 1 shows the extent of awareness of available electronic information resources by academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. The findings revealed E-Journals ( $\bar{X} = 3.17$ ,  $SD = 1.10$ ), E-Newspapers ( $\bar{X} = 3.15$ ,  $SD = 1.01$ ), E-Government documents ( $\bar{X} = 3.13$ ,  $SD = 0.98$ ), E-Books ( $\bar{X} = 3.09$ ,  $SD = 1.07$ ), Online Public Access Catalogue (OPAC) ( $\bar{X} = 3.09$ ,  $SD = 0.98$ ), E-Magazines ( $\bar{X} =$



3.07, SD = 1.02), E-Manuscripts ( $\bar{X}$  = 3.04, SD = 0.97), Web Public Access Catalogue (WebPAC) ( $\bar{X}$  = 3.02, SD = 1.04), E-Lecture Note ( $\bar{X}$  = 3.02, SD = 1.04), Abstracting Database ( $\bar{X}$  = 2.91, SD = 1.15), Indexing Databases ( $\bar{X}$  = 2.83, SD = 1.12), E-Reference materials ( $\bar{X}$  = 2.78, SD = 1.15), CD ROM ( $\bar{X}$  = 2.78, SD = 1.15), E-Research Reports ( $\bar{X}$  = 2.22, SD = 1.23) and E-pre Print ( $\bar{X}$  = 2.13, SD = 1.15). The cluster Mean of ( $\bar{X}$  = 2.90) and Standard Deviation of (SD = 1.08) indicate that academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State Nigeria are aware of available information resources to a high extent. The finding of this study agrees with the finding of Yebowaah and Plockey (2017) who in their study revealed that 65% of users are aware of the availability of electronic information resources in the library for users. The finding of this study is in line with Onmueme and Lulu-Pokula (2017) who found out that academic staff utilizes electronic information resources to a high extent due to their awareness of electronic information resources. It also corroborates with Madu (2019) who found out that there is high extent of awareness among academic staff and their extent of awareness has increased their extent of electronic information resources utilization.

**Research Question Two**

To what extent does academic librarians utilize the electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria?

**Table 2: Extent of utilization of electronic information resources by academic librarians for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria (n=46)**

S/N	ITEM STATEMENT	Mean	SD	Rank	Decision
1	E-Books	3.11	1.10	5 <sup>th</sup>	VHE
2	E-Research Reports	2.13	1.20	14 <sup>th</sup>	LE
3	E-Journals	3.35	0.97	1 <sup>st</sup>	VHE
4	E-Magazines	3.09	1.07	6 <sup>th</sup>	VHE
5	E-Reference materials	3.00	1.05	9 <sup>th</sup>	VHE
6	E-Government documents	3.20	1.02	4 <sup>th</sup>	VHE
7	Indexing Databases	2.83	1.14	12 <sup>th</sup>	HE
8	Web Public Access Catalogue (WebPAC)	2.91	1.03	11 <sup>th</sup>	HE
9	Online Public Access Catalogue (OPAC)	3.22	0.89	2 <sup>nd</sup>	VHE
10	E-Manuscripts	3.04	0.97	7 <sup>th</sup>	VHE
11	E-pre-Print	2.07	1.12	15 <sup>th</sup>	LE
12	CD ROM	2.93	1.12	10 <sup>th</sup>	HE
13	E-Newspapers	3.02	1.06	8 <sup>th</sup>	VHE
14	E-Lecture Note	2.80	1.09	13 <sup>th</sup>	HE
15	Abstracting Database	3.21	0.94	3 <sup>rd</sup>	VHE
	<b>Cluster Mean</b>	<b>2.93</b>	<b>-</b>	<b>-</b>	<b>HE</b>

Finding in Table 2 shows extent of utilization of electronic information resources by academic librarians for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. The findings revealed E-Journals ( $\bar{X}$  = 3.35, SD = 0.97), Online Public Access

Catalogue (OPAC) ( $\bar{X} = 3.22$ , SD = 0.89), Abstracting Database ( $\bar{X} = 3.21$ , SD = 0.94), E-Government documents ( $\bar{X} = 3.20$ , SD = 1.02), E-Books ( $\bar{X} = 3.11$ , SD = 1.10), E-Magazines ( $\bar{X} = 3.09$ , SD = 1.07), E-Manuscripts ( $\bar{X} = 3.04$ , SD = 0.97), E-Newspapers ( $\bar{X} = 3.02$ , SD = 1.06), E-Reference materials ( $\bar{X} = 3.00$ , SD = 1.05), CD ROM ( $\bar{X} = 2.93$ , SD = 1.12) Web Public Access Catalogue (WebPAC), ( $\bar{X} = 2.91$ , SD = 1.03), Indexing Databases ( $\bar{X} = 2.83$ , SD = 1.14), E-Lecture Note ( $\bar{X} = 2.80$ , SD = 1.09), E-Research Reports ( $\bar{X} = 2.13$ , SD = 1.20) and E-pre Print ( $\bar{X} = 2.07$ , SD = 1.12). The grand Mean of ( $\bar{X} = 2.93$ ) and Standard Deviation of (SD = 1.05) indicate that academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State Nigeria utilized electronic information resources for research output to a high extent. The finding of this study is in line with the finding of Sajene (2017) whose study revealed that mails (e-mails), search engines, websites, online public access catalogue (OPAC), electronic journals (e-journals), full text databases, institutional repositories (IRs) and compact disc-read only memory (CD-ROMs) are the frequently utilized electronic information resources. The finding of this study corroborates with Acheampong, Mingle, Smart and Kofi (2020) whose study revealed that majority of the scientists used electronic information resources. The finding of this study agrees with Onmueme and Lulu-Pokula (2017) who noted that academic staff utilizes electronic information resources to a high extent. The finding of this study is in line with the finding of Madu (2019) who found out that extent of awareness among academic staff has increased their extent of electronic information resources utilization.

### Research Question Three

What are the challenges encountered by academic librarians in the utilization of electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State Nigeria?

**Table 3: Challenges encountered by academic librarians in the utilization of electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria (n=46)**

S/N	ITEM STATEMENT	Mean	SD	Rank	Decision
1	Lack of facilities such as computers, laptops, palmtops, iPads	3.19	1.02	2 <sup>nd</sup>	Agree
2	Lack of search techniques knowledge	2.09	1.21	10 <sup>th</sup>	Disagree
3	Unreliable internet connectivity	3.07	1.06	6 <sup>th</sup>	Agree
4	Lack of awareness of available electronic resources	3.00	1.01	7 <sup>th</sup>	Agree
5	Low level of computer knowledge	3.13	1.05	3 <sup>rd</sup>	Agree
6	Lack of time due to routine tasks	2.83	1.20	8 <sup>th</sup>	Agree
7	Inadequate resources	3.07	1.04	5 <sup>th</sup>	Agree
8	Epileptic power supply	3.20	0.96	1 <sup>st</sup>	Agree
9	Electronic resources are most of the time outdated	2.13	1.15	9 <sup>th</sup>	Disagree



10	Lukewarm personal attitude resulting to ineffective utilization of electronic resources	3.11	1.08	4 <sup>th</sup>	Agree
	<b>Cluster Mean</b>	<b>2.88</b>	-	-	<b>Agree</b>

Finding in Table 3 show the Challenges encountered by academic librarians in the utilization of electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State Nigeria. The finding revealed Epileptic power supply ( $\bar{X} = 3.20$ ,  $SD = 0.96$ ), Lack of facilities such as computers, laptops, palmtops, iPads ( $\bar{X} = 3.19$ ,  $SD = 1.02$ ), Low level of computer knowledge ( $\bar{X} = 3.13$ ,  $SD = 1.05$ ), Lukewarm personal attitude resulting to ineffective utilization of electronic resources ( $\bar{X} = 3.11$ ,  $SD = 1.08$ ), Inadequate resources ( $\bar{X} = 3.07$ ,  $SD = 1.04$ ), Unreliable internet connectivity ( $\bar{X} = 3.07$ ,  $SD = 1.06$ ), Lack of awareness of available electronic resources ( $\bar{X} = 3.00$ ,  $SD = 1.01$ ), Lack of time due to routine tasks ( $\bar{X} = 2.83$ ,  $SD = 1.20$ ), Electronic resources are most of the time outdated ( $\bar{X} = 2.13$ ,  $SD = 1.15$ ) and Lack of search techniques knowledge ( $\bar{X} = 2.09$ ,  $SD = 1.21$ ). The grand Mean of ( $\bar{X} = 2.88$ ) and Standard Deviation of ( $SD = 1.08$ ) shows that there are challenges encountered by academic librarians in the utilization of electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State Nigeria. The finding of this study is in line with the finding of Yebowaah and Plockey (2017) who discovered inadequate library infrastructure, inadequate resources, low level of computer knowledge, low internet bandwidth, and inadequate trained library staff as the major challenges confronting the use of electronic resources. This study corroborates with Okorie, Nwakocho and Ibenne (2018) who in their study identified epileptic power supply, lack of time due to routine tasks and the cost of access as the main challenges faced by the students in the use of electronic information resources. The finding of this study agrees with Acheampong, Mingle, Smart and Kofi (2020) who noticed some of the challenges to accessing the electronic information resources to include poor ICT infrastructure and lack of skills in accessing the resources.

## Conclusion

Based on this finding, it was concluded that academic librarians at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria, are aware of available electronic information resources and these resources are utilized for their research output. There are numerous challenges encountered by academic librarians in the utilization of electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria, for improved research output and if these challenges are properly handled, there will be adequate utilization of electronic information resources and the research output of academic librarians will be improved.

## Recommendations

Based on these findings, the study recommended that:

- i. The university management should create more awareness and ensure proper funding of the ICT department to encourage high level utilization of electronic information resources by academic librarians for improved research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

- ii. The university management should also provide ICT facilities and up to date resources to encourage academic staff to utilize electronic information resources for research output at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.
- iii. There should be training and retraining of academic librarians to create awareness and improve the utilization of electronic information resources at Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

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