



**Use of Print and Non-Print Resources as Factors Influencing Research Productivity of Librarians in Private Universities in Southwest, Nigeria**

**By**

**Samuel Olabode Fabunmi**  
Albert Ilemobade Library,  
The Federal University of Technology, Akure.  
[sofabunmi@futa.edu.ng](mailto:sofabunmi@futa.edu.ng)

***ABSTRACT***

*The study investigated the use of print and non-print resources as factors influencing research productivity among librarians in private universities in South-west, Nigeria. The descriptive survey method was employed for the study. The purposive sampling method was used to select 12 out of the 34 private universities in the South-West Nigeria. Random sampling method was used to select ten (10) librarians each from two private universities in six states making a total number of 120 librarians. One hundred and twenty (120) copies of the questionnaire were administered to librarians and 109 copies were retrieved, giving a response rate of 90.8%. The data was analyzed using frequency count, percentages, mean and standard deviation. The findings of the study revealed that majority of the librarians used textbooks, atlases newspapers, electronic books, electronic encyclopedias, online public access catalogue and online conference proceedings for their research activities. Also, journal articles, co-edited books published and conference paper presentation were the research resources that contributed to librarians' research productivity. Major factors influencing the use of print and non-print resources were library orientation, awareness of electronic resources, level of availability and accessibility on resources. Publication cost, lack of research orientation and high cost of internet access were the major challenges facing librarians in their research productivity. It is recommended that academic libraries should try as much as possible to conduct training, seminars as means to increase print and electronic information resources awareness, access and use. Time management should be inculcated by the librarians in order to have time to study and research.*



*Keywords: Academic librarians, Non-print resources, Print resources, Private Universities, Research productivity.*

## **INTRODUCTION**

Librarians in academic library are saddled with the responsibility of providing and making available information resources for use to meet the information needs of library clientele. As a result, the main function of the librarians in providing these resources cannot be over-emphasized. These major functions among others include: selection, acquisition of materials, storage, cataloguing and classification of books and monographs, circulation/dissemination of information materials, indexing and abstracting of newspapers and periodicals. Librarians in private universities carry out these same functions to meet the information needs of their library clientele. This is because the objectives of academic libraries in Nigerian universities today to their parent institution is to support teaching, learning, research and community services delivery geared towards providing information for social, political and economic development of the country (Ikegune and Awujoola, 2017). Information resources in the library are in both print and non-print formats such as textbooks, reports, indexes, abstracts, journals, newspapers and magazines, CD-ROM databases and Internet/E-mail. Librarians in the process of providing the resources to users as part of their daily activities in the library as well utilize these information resources to enhance their research productivity and academic work.

Research productivity of librarians in private universities in Nigeria is paramount to develop the university and the library as a growing organism. Research is carried out to develop the educational system and to add to the existing body of knowledge of great philosophers or scholars in a particular area of discipline. Ifijeh, Ogbomo and Ifijeh (2018) alluded that research plays an important role in facilitating the prosperity of a nation and the well-being of her people and that through research, Universities and other higher institutions of learning make important contributions to the growth and development of vital sectors of a nation, thereby promoting national and global development. Research productivity is a requirement for promotion for an academic librarian and also enables them to earn recognition nationally and internationally. Librarian must be versatile and advance in research and apply practicable knowledge as a result of research carried out to proffer solutions to the challenges encountered in providing library



services. Meanwhile, profound solution can be derived as a result of quality research. The challenges encountered in today's 21<sup>st</sup> century library is the application of modern information and communication technologies (ICTs). Research productivity are carried out through different medium or format such as in journal articles, published books, chapters in books, technical reports, conference papers, seminar papers, edited works, workshop papers, thesis and other types of publications.

Research productivity of librarians portrays librarians to be seasoned or professional librarians. Research productivity of librarian is reflected in the quantity and quality of articles and papers published by the affiliated university library. In the word of Fennewald (2008) and; Ocholla, Ocholla and Onyancha (2012), librarians carry out research and publish for career related rewards such as status enhancement, promotion, securing tenure or permanent appointment; to gain recognition for creative thinking, visibility and acceptability within and outside the university community; to satisfy intellectual curiosity. According to Okonedo (2015) as a result of the academic status accorded librarians and the importance attached to research and publications in universities in Nigeria, academic librarians have accepted the reality of conducting research and publishing their output in scholarly/reputable outlets like their teaching counterparts. The consequence of not waking up to this reality of undertaking research and publishing is accepting to perish in the academic deep blue sea. The recognition and advancement of librarians rest greatly on the quantity and quality of their research output. An important variable that may influence research productivity of librarians in private universities in Nigeria is the print and non-print resources in the library.

Print resources in the library are information resources, acquired, organized and disseminated to users in the library. Resources in the library are expected to meet users information needs, therefore, must be relevant, accurate and timely available and the services are to be provided by the librarians for the purpose of utilization by the clientele to achieve the objectives of their institutions. The print resources in the library includes; books, journals, magazines, newspapers, abstract/indexes, pamphlets, theses/dissertations, conference proceedings, technical reports, government document, statistical publications, encyclopedias, directories/handbooks, dictionaries and audio-visuals. Mohammed (2015) refers print resources to be the predominant physical format of information resources in the library and that they were



the primary means of providing information services in university libraries. Resources in print format seem not to be the first information source to be considered by most scholars, most especially, among the undergraduates and postgraduate students when conducting research, librarians inclusive. Print resource is now been seen as secondary source of information as a result of advancement in technology. Information technology has made researchers to have an ample opportunity to carry out research with ease. With the use of ICTs and availability of internet, librarians have access to various literatures or scholarly materials online with ease to conduct research within short period of time compare to the use of print resources that could take a longer time in conducting research.

Print resources in the library are information sources librarians and other researchers used in conducting research before the advent of ICTs. The availability and accessibility encourage research among librarians. Other terms for print resources are print information, print-based resources, print sources and print materials (Ukpebor, 2017). In the time of traditional library operation, print is a time-tested format that continues to fulfill promises that technology cannot yet deliver (Wu, 2005). According to International Federation of Reproduction Rights Organisations (2005), print resources are print source of information which includes fiction and non-fiction, books, journals, pamphlets, periodicals, magazines, newspapers, works of visual arts as well as photography and sheet of music. The Department of Rehabilitation and Correction, Ohio (2013) refers print resources to mean any publication, document, or record including, but not limited to, the following: newspapers, magazines, pamphlets, books, photographs, drawings. The term print resources', does not include reading materials in electronic format. A print source is a source that is not viewed via a computer or other electronic devices (Ukpebor, 2017).

Use of print resources could be a tedious task or easy to use by librarians in carrying out research though depends on user interests or choice of use, skills, tastes, education and experience. Also, librarians in private universities use various kinds of print resources to conduct research but prefer specific such as textbooks, journals, encyclopedias, newspapers, dictionaries, abstract/indexes, theses/dissertations, conference proceedings and government document. Librarians in private universities' seem to face certain challenges in using print resources for research. In most cases the preferred information materials may not be readily available, relevant and accurate for use. Therefore, as a result, most librarians in private universities are discouraged



in conducting research and some are naturally lazy in conducting research provided they are employed and included in the Federal Civil Service scheme. Farlex (2015) defined print resources as different sources of printed or written literary work. Reitz (2015) also considered print resources as any physical thing that can be read, from the back of a cereal box to a philosophical treatise. Also, the development of non-print resources posed some challenges to university library's ability to readily provide information resources for use. At the time that printed information resources were the only or main sources of information and services, librarians selected, acquired, processed, stored and organized these information (print) resources for patrons to utilize and as well use for personal consumption. The non-print resources, development, organization and services have radically deviated from the traditional approach used for print resources, such as acquisition, organization, processing, storage, accessing and services (Mohammed, 2015).

Non-print resources are resources that are not in print form. Another name for non-print resources is called electronic resources and Internet resources including; electronic encyclopedias, e-books, e-journals, e-theses and dissertations, CD-ROM databases, online databases and web-based resources in libraries. Non-print or electronic resources require the knowledge and use of computers in accessing resources online with the use of Internet. Electronic resources are materials that are available and can be accessed electronically through such computer networked facilities as online library catalogues, the Internet and the World Wide Web, digital libraries and archives, government portals and websites, CD-ROM databases, online academic databases, such as Medline or commercial databases such as LexisNexis (Karunarathna, 2014). In the past, most university libraries provided information in print format such as print textbooks, newspapers, monographs, magazines and so on, but with the advancement in technology, most libraries have expanded their collections to include electronic resources abbreviated as e-resources (Adeniran, 2017). The Anglo- American Cataloguing Rules, Second Edition (AACR2, 2005:p.1) defined an electronic resource as “material (data and/or programs) encoded for manipulation by a computerized device. This material may require the use of a peripheral directly connected to a computerized device (e.g., CD-ROM drive) or a connection to a computer network (e.g., the Internet)”.



Electronic resources are any collection of information created electronically that form part of an electronic record and that is usually stored separately within the digital file making up the electronic record as a whole. Every electronic record consists of at least one digital object, component or element, such as the bits of data that come together to create a word processed document (Adeniran, 2017). To effectively use electronic resources for research there is a need to have computer skills and information retrieval skills known as information literacy skills. Meanwhile, the development in ICTs has brought about the emergence of electronic information resources and services in libraries such as Internet services, databases, Compact Disc Read Only Memory (CD-ROM), online catalogue and web resources. There is a paradigm shift in information resource and services in libraries with the advent of ICTs. Abubakar (2011) noted that the global trend is characterized by a fundamental shift from traditional information environment to an e-environment where emphasis is placed more on acquisition of e-resources such as e-books, e-journals as well as on-line databases.

Non-print resources had become important sources of information in academic institutions around the world. The use of non-print resources in conducting research in academic libraries most especially by librarians has produced massive research outputs and contributed to knowledge in academic world as librarians can now access information resources across the globe without restriction which was practically impossible in the past. Given credence to this, according to Adeniran (2017) university libraries, can, therefore, go beyond the information resources present in the physical library to enable access to information in remote servers. In university community where students are mostly engaged in research activities, the provision of e-resources becomes important considering that the resources contain frequently updated information. Due to the several advantages of e-resources such as timeliness, search facilities, remote access and up datedness, they become more indispensable after the arrival of the Internet in the academic environment. The provision of e-resources in tertiary institutions of learning is a new ways of gaining quick access to a great number of research information resources globally. As a result of the potential benefits offered by e-resources, they have been embraced by librarians in conducting research.

Print and non-print resources are valuable resources and indispensable in conducting research and for research productivity by librarians. Librarians in private universities face one



challenge or another in using both print and non-print resources in conducting research. One among the major challenges is the issue of funding to acquire modern ICTs tools in the library. Others includes; poor Internet connectivity, limited number of computers among others. According to Nigerian Research and Education Network (2016) in Adeniran (2017), private universities, depend mostly on subvention from their proprietors and other internally generated revenue (IGR) to fund their library resources. Although, most private university libraries spend money in the acquisition of electronic resources, some libraries devoted plenty hours to harvesting free electronic resources online with the goal of increasing access and use of electronic resources. However, irrespective of what libraries are able to provide, the utilisation of a product or service is very important as it shows the value attached to such product or service. On the other hand, when a service or product is under-utilized, it indicates that there is a problem with it. In such situations, it is necessary for library management to critically review the product or service. The low level of research output by librarians in private university is a question of whether the librarians effectively use the available print and non-print resources in conducting research.

### **Statement of the problem**

Basically, one of the major requirements for librarian to be considered for promotion in the library is attached to their research productivity. According to Okonedo (2015) it is as a result of the academic status accorded librarians and the importance attached to research and publications in universities in Nigeria, academic librarians have accepted the reality of conducting research and publishing their output in scholarly/reputable outlets like their teaching counterparts. The consequence of not waking up to this reality of undertaking research and publishing is accepting to perish in the academic deep blue sea. Nevertheless, it could be argued that there is a low level of research productivity among librarians in private universities in Southwest, Nigeria. The major reason to this low level of research productivity is funding. This is due to the fact that in most private universities, there is a dearth of scholarly information resources, most resources available are not accurate, relevant and adequate in conducting research. More so, only few modern computer are available and the most available ones are obsolete which are not satisfactory most times in searching for online scholarly journals.



Furthermore, most librarians in private universities do not possess requisite knowledge in the use of computers to navigate the Internet and accessing resources online. Therefore, could not effectively use electronic resources such as online library catalogues, the World Wide Web, digital libraries and archives, government portals and websites, CD-ROM databases, online academic databases, such as Medline or commercial databases such as LexisNexis among others. Meanwhile, in order to improve research productivity, librarians must know how to effectively use the available print and non-print resources in the library. It is on this premise that the study is being carried out to investigate use of print and non-print resources as factors influencing research productivity of librarians in private universities in Southwest, Nigeria.

### **Objectives of the study**

The main objective of the study will be to investigate use of print and non-print resources as factors influencing research productivity of librarians in private universities in Southwest, Nigeria. The specific objectives are to:

- i. find out the print resources used by librarians in private universities in Southwest Nigeria;
- ii. find out the non-print resources used by librarians in private universities in Southwest Nigeria;
- iii. extent of research productivity among librarians in private universities in Southwest Nigeria;
- iv. find out the factors influencing use of print and non- print resources on research productivity of librarians in private universities in Southwest Nigeria;
- v. determine the challenges librarians faced in using print and non-print resources in their quest for research productivity in private universities in Southwest Nigeria.





### **Research questions**

The following research questions will be drawn to guide the study

1. What are the print resources used by librarians in private universities in Southwest Nigeria?
2. What are the non-print resources used by librarians in private universities in Southwest Nigeria?
3. What is the extent of research productivity among librarians in private universities in Southwest Nigeria?
4. What are the factors influencing use of print and non- print resources on research productivity of librarians in private universities in Southwest Nigeria?
5. What are the challenges librarians faced in using print and non-print resources in their quest for research productivity in private universities in Southwest Nigeria?

### **Hypothesis**

The null hypothesis will be tested in the study at 0.05 level of significance:

Ho<sub>1</sub> There is no significant relationship between librarians' use of print and non-print resources and research productivity in private universities in Southwest Nigeria.

### **Literature Review**

Research productivity can be regarded as the number of papers published by a selected unit at a particular point in time (Sudhier and Abhila, 2011). Therefore, research productivity connotes the number of publications librarians produced at a given point in time. Outputs of research are in journals, conference proceedings, writing books or chapters in books, dissertations, carrying out editorial duties, obtaining patents and licenses, writing monographs, developing experimental designs, (Iqbal and Mahmood, 2011). Publication has been a major impetus for individual promotion, evidence of institutional excellence, and an opportunity for obtaining competitive research funds (Ramsden, 2014). Ogbomo 2010 asserted that librarians are motivated to engage in publication for various reasons because research productivity of librarians is influenced by enthusiasm to publish, cool and serene environment, and individual perception and most importantly, their roles in libraries.

According to Rhodman (2002), one of the importance of research productivity stated that it gives librarians opportunity to share insights, demonstrate academic scholarship, gain



recognition for creative thinking, and to develop a strong reputation in their area of specialization. This is in line with the findings of Katz and Coleman (2001) who supported the whole idea that participation in research improves librarians' self-confidence, increases their intellectual capacity, boost their status academically and professionally. In a related study, on librarians' research publication, Hart (1999) found out that majority of the librarians at the Penn State University recognized the importance of publications for their career advancements and most of them spent about 19.8 hours per month on their research. This has resulted in an increase in the amount of research and publication output among Penn State University Librarians over the 15 to 20 year period studied.

Manhas (2008) in Punjab State of India carried out a study on the use of electronic resources and the result revealed that use of electronic resources in order of preference were e-books (43.6%), e-databases (34.5%), DVD/CD-ROMs (16.3%) and other electronic resources were (7%). In another related study by Dhanavandan (2012) on the access to and awareness of ICT resources and services in the Medical College Libraries in Puducherry, findings of the study revealed that (87.33%) of the respondents used electronic database for the purpose of their research, (61.33%) of the respondents used library resources for communication purpose, while (54.66%) of the respondents print resources for finding information, (34.66%) respondents used electronic resources for career development and (20.66%) of the respondents used non- print resources for other activities. Furthermore, Thanuskodi (2012) investigated the use of e-resources by the students and researchers of the Faculty of Arts, Annamalai University, administering a questionnaire on research scholars and postgraduate students. The study revealed that the majority (76.66%) of the respondents used e-resources for writing papers. The analysis reveals that many of the respondents search e-resources through linking facility available on the library website. In a study of the use of electronic resources by research scholars of Kurukshetra University, Madhusudhan (2010) also found that e-resources formed an integral part of the information needs of the scholars, noting that fast access to e-resources and deployment of more computer terminals could be good substitutes for conventional resources. Sahu, Patra and Rabindra (2013) studied the use of electronic resources by research scholars in two universities in Odisha, India, and found that majority of the respondents were aware of the electronic resources in both the universities while most of them used the electronic resources on a daily



basis. Results from the study revealed that electronic resources were rapidly adopted in academic spheres, though the behaviour varies according to discipline and the readiness of both the librarians and the users in general.

In Nigeria, Okafor (2011) conducted a study on research productivity of librarian, and revealed that there is no significant difference in the mean research output of academics in the universities used for his study in Southern Nigeria; but there is statistical difference in the mean research output between the universities when local journal publications were considered.

**Methodology**

The descriptive survey method was employed for this study. The purposive sampling method was used to select 12 out of the 34 private universities in the South-West Nigeria. Random sampling method was used to select ten (10) librarians each from two universities in six states making a total number of 120 librarians. Questionnaire was used to collect data from respondents. One hundred and twenty (120) copies of the questionnaire were administered, and 109 were retrieved giving a response rate of 90.8%.

The study focused on the use of print and non-print resources on research productivity of librarians which was measured as publication counts. Publication counts can be regarded as self-reported number of journal articles (Library and Information science in both local and international fields), conference papers and proceedings, chapters in books, co-authored books, and textbooks produced between the period of 2015-2020 by librarians. Data were analyzed using frequency count, percentages, mean and standard deviation.

**Table 1: Questionnaire administration and rate of return**

S/n	Name of Private University	State	Year Founded	Sample size	Questionnaire. Returned	Response rate %
1	Ajayi Crowther University, Oyo	Oyo	2005	10	10	100.0
2	Leadcity University, Ibadan		2005	10	10	100.0
3	Pan-Atlantic University, Lekki	Lagos	2002	10	9	90.0
4	Caleb University,		2008	10	9	90.0



	Ikorodu					
5	Babcock University, Ilishan-Remo	Ogun	1999	10	10	100.0
6	Covenant University, Canaan land, Ota		2002	10	9	90.0
7	Bells University of Technology, Ota		2005	10	8	80.0
8	Bowen University, Iwo	Osun	2001	10	9	90.0
9	Redeemer’s University, Ede		2005	10	9	90.0
10	Achievers University, Owo	Ondo	2007	10	9	90.0
11	Wesley University of Science& Technology, Ondo		2007	10	8	80.0
12	Afe Babablola University, Ado-Ekiti	Ekiti	2009	10	9	90.0
	<b>Total</b>			<b>120</b>	<b>109</b>	<b>90.8</b>

## GENDER

Table 2 above shows that 78.9% respondents are male while 21.1% respondents are female. This implies that there were more male respondents than female.

**Table 2 :- Gender of Respondents**

Item	Frequency	Percentage (%)
Male	86	78.9%
Female	23	21.1%
<b>Total</b>	<b>109</b>	<b>100%</b>



**Table 3:- Academic Qualification**

Item	Frequency	Percentage (%)
Ph.D	8	7.3%
M.Phil	15	13.1%
Masters	67	61.5%
First Degree	19	17.4%
<b>Total</b>	<b>109</b>	<b>100%</b>

Table 3 shows that majority of the respondents has Masters' degree certificate with 61.5%, followed by First degree with 17.4%, those that has M.Phil were 13.1% while the least respondents were those with Ph.D constituting 7.3%.

**Table 4 Years of Experience as Librarian**

Years	Frequency	Percentage (%)
1 – 5 years	34	31.2%
6 – 10 years	22	20.2%
11 – 15 years	27	24.8%
16 – 20 years	19	17.4%
More than 20 years	7	6.4%
<b>Total</b>	<b>109</b>	<b>100%</b>

Table 4 shows the working years of librarians with 1 to 5years respondents with 31.2%, followed by 11-15 years respondents with 24.8%, 6-10 years with 20.2%, 16-20 years with 17.4% while the least respondents were those with more than 20 years with 6.4% respectively.

**Table 5 Status**

Status	Frequency	Percentage (%)
Principal Librarian	6	5.5%
Senior Librarian	14	12.8%
Librarian I	56	51.4%
Librarian II	28	25.7%



Assistant Librarian	5	4.6%
<b>Total</b>	<b>109</b>	<b>100%</b>

Table 5 shows that majority of the respondents were Librarian I with 51.4% while the least respondents were Assistant librarian with 4.6%.

**Research Question 1: What are the print resources used by Librarians in private universities in South-West Nigeria?**

**Table 6 Print Resources used by Librarians**

S/N	Print Resources	Strongly Agreed(SA)	Agreed (A)	Disagreed (D)	Strongly Disagreed (SD)
1	Journals	54(49.5%)	34(31.2%)	15(13.8%)	6(5.5%)
2	Textbooks	76(69.7%)	31(28.4%)	2(1.8%)	-
3	Dictionaries	57(52.3%)	18(16.5%)	17(15.6%)	17(15.6%)
4	Maps	58(53.2%)	17(15.6%)	17(15.6%)	17(15.6%)
5	References books	55(50.5%)	20(18.3%)	17(15.6%)	17(15.6%)
6	Newspapers	74(67.9%)	17(15.6%)	17(15.6%)	1(0.9%)
7	Encyclopedias	56(51.4%)	19(17.4%)	17(15.6%)	17(15.6%)
8	Directories	73(67%)	20(18.3%)	-	16(14.7%)
9.	Atlases	64(58.7%)	20(18.3%)	17(15.6%)	8(7.3%)

Table 6 shows that 49.5% of the respondents indicated that journal is the one of the resources used by Librarians, 69.7% also revealed that textbooks are used by Librarians in private universities in Nigeria. Also 52.3% of the respondents also stated that Maps is one of the resources used by Librarians, 50.5% also stated references books as one of the resources used by Librarians. Another printable resources used by Librarians in most private universities is Newspaper as indicated by 67.9% of the study participants. Furthermore, 51.4% revealed Encyclopedias as the printed resources Librarians utilized, 67% of the study participants also revealed that Directories as the print resources utilized by Librarians in private universities in



South-West. In conclusion, 58.7% of the respondents indicated Atlases as the print resources librarian utilizes in most private universities.

**Research Question 2: What are the non-print resources used by Librarians in private universities in South-West Nigeria?**

**Table 7 Non-Print Resources used by Librarians**

S/N	Non - Print Resources	SA	A	D	SD
1	Electronic books	69(63.3%)	39(35.8%)	1(0.9%)	-
2	Online databases	56(51.4%)	22(20.2%)	20(18.3%)	11(10.1%)
3	Electronic journals	55(50.5%)	13(11.9%)	20(18.3%)	21(19.3%)
4	CD-ROM database	32(29.4%)	31(28.4%)	28(25.7%)	18(16.5%)
5	Electronic encyclopedias	67(61.5%)	23(21.1%)	12(11%)	7(6.4%)
6	Electronic textbooks	47(43.1%)	32(29.4%)	28(25.7%)	2(1.8%)
7	Online Public Access Catalogue	93(85.3%)	-	15(13.8%)	1(0.9%)
8	Online conference proceeding	93(85.3%)	3(2.8%)	-	13(11.9%)
9.	Electronic newspapers	66(60.6%)	19(17.4%)	12(11%)	12(11%)
10.	Electronic theses and dissertations	48(44%)	30(27.5%)	22(20.2%)	9(8.3%)

Table 7 shows respondents view on non-print resources used by librarians in private universities in South-West Nigeria where 63.3% strongly agreed that electronic books were used by Librarians, 51.4% also stated that online databases were the non-print resources used by librarians, 50.5% stated that electronic journals are usually utilized by librarians in private universities, 29.4% of the study participants also revealed that CD-ROM database is one of the non-print resources. Furthermore, it was revealed by 61.5% of the study participant that electronic encyclopedias was the non-print resources used in private universities in South-Western part of Nigeria. In addition, it was also observed that 43.1% of the study participants stated electronic textbooks as the non-print materials Librarians in private universities assessed. It was also found that 85.3% of the respondents strongly agreed that Online Public Access Catalogue (OPAC) is used by Librarians in most private universities. The same percentage of respondents also indicated that they utilized online conference proceedings. In conclusion, it was also observed that 60.6% of the study participants stated that librarians made use of electronic



newspapers while 44% of the study participants strongly agreed that electronic theses and dissertations are the non-print resources used by librarians in private universities in South-Western Nigeria.

**Research Question 3: What is the extent of librarians’ research productivity in private universities in South-West Nigeria between 2015-2020?**

**Table 8 Librarians’ Research Productivity**

S/N	Research Productivity	Frequency			
		1–3 times	4–6 times	7–10 times	More than 10 times
1	Chapters in books	56(51.4%)	32(29.4%)	12(11%)	9(8.3%)
2	Technical reports	12(11%)	41(37.6%)	56(51.4%)	-
3	Conference paper presentation	14(12.8%)	2(1.8%)	24(22%)	69(63.3%)
4	Journal articles published	76(69.7%)	19(17.4%)	9(8.3%)	5(4.6%)
5	Seminar papers	6(5.5%)	11(10.1%)	14(12.8%)	78(71.6%)
6	Edited books published	10(9.2%)	24(22%)	24(22%)	51(46.8%)

Table 8 shows the extent to which the following research resources contributes to librarians research productivity where 51.4% of the study participants indicated that chapters in books had contributed to research productivity among librarians 1- 3 times, while 51.4% stated that Technical reports were consulted 7 – 10 times by Librarians, 63.3% of the respondents also stated that on more than 10 times they have consulted conference paper presentation, also 69.7% stated that on the range of 1 – 3 times, Librarians have consulted Journal articles published, 71.6% also stated that on more than 10 times they have used seminar papers on the same frequency, 46.8% have used edited books published which enhance librarian productivity.





**Research Question 4: What are the factors influencing use of print and non-print resources on research productivity of librarians in private universities in South-West Nigeria?**

**Table 9 Factors influencing use of print and non-print resources**

S/N	Factors	SA	A	D	SD
1	Access to electronic resources	51(46.8%)	27(24.8%)	23(21.1%)	8(7.3%)
2	Computer skills	41(37.6%)	-	48(44%)	20(18.3%)
3	Library orientation	63(57.8%)	17(15.6%)	18(16.5%)	11(10.1%)
4	Internet connectivity	52(47.7%)	25(22.9%)	26(23.9%)	6(5.5%)
5	Awareness of electronic resources	61(56%)	11(10.1%)	10(9.2%)	27(26.6%)
6	Intention to use resources for academic research	54(49.5%)	29(26.6%)	20(18.3%)	6(5.5%)
7	Level of availability and accessibility on resources	56(51.4%)	28(25.7%)	15(13.8%)	10(9.2%)

Table 9 shows the factors influencing the use of print and non-print resources where 46.8% of the respondents revealed that access to electronic resources has been a factor influencing the use of print and non-print resources, 44% of the respondents lacks computer skills, 57.8% of the respondents revealed that library orientation is one of the factors influencing the use of print and non-print resources, 47.7% of the respondents indicated that lack of internet connectivity has been known to influence the use of print and non-print resources. It was also found that 56% of the study participants strongly agreed that they are aware of electronic resources, 49.5% strongly agreed that intention to use resources for academic research influenced the use of print and non-print resources which enhances productivity level of librarians. In conclusion, 51.4% of the study participants revealed that the level of availability and accessibility on resources influenced the level of productivity among librarians in South-Western private universities in Nigeria.



**Research Question 5: What are the challenges librarians faces in using print and non-print resources in their quest for research productivity in private universities in South-West Nigeria?**

**Table 10 Challenges facing Librarians in Research Productivity**

S/N	Challenges	SA	A	D	SD	Mean	Std. Dev
1	Publication cost	64(58.7%)	28(25.7%)	9(8.3%)	8(7.3%)	3.69	.461
2	Limited time and deadline of work	46(42.2%)	43(39.4%)	11(10.1%)	9(8.3%)	3.47	.501
3	Lack of research orientation	69(63.3%)	22(20.2%)	9(8.3%)	9(8.3%)	3.22	.422
4	High cost of Internet access	62(56.9%)	30(27.5%)	11(10.1%)	6(5.5%)	3.32	.469
5	Lack of research infrastructure (laptop, computer, Wifi, Data)	43(39.4%)	46(42.2%)	12(11%)	8(7.3%)	3.49	.502
6	Constant power failure	48(44%)	45(41.3%)	8(7.3%)	8(7.3%)	3.48	.502
7	Lack of computer skills	55(50.5%)	29(26.6%)	14(12.8%)	11(10.1%)	3.33	.475

Table 10 shows the challenges facing librarians in Research productivity where 58.7% of the respondents strongly agreed that publication cost is a factor affecting research productivity, 42.2% also were of the opinion that there is limited time and deadline of work, which is believe could affect the research productivity. In addition, 63.3% of the study participants also stated that lack of research orientation among librarians in private universities affect research productivity, 56.9% ascribed the challenges experienced to high cost of internet access, 42.2% also revealed that lack of research infrastructure (laptop, computer, Wifi, Data) affects research productivity by librarians in private universities in South-West Nigeria. In conclusion, 44% of the study participants revealed that constant power failure experienced in private universities in South-West Nigeria affect the research productivity also 50.5% also revealed the lack of computer



skills among librarians as the factor affecting research productivity in private universities in South-West Nigeria.

**There is no significant relationship between librarians’ use of print and non-print resources and research productivity in private universities in Southwest Nigeria**

**Correlations**

	Mean	Std. Dev	Research productivity	Print Resources	Non Print Resources
Research productivity	13.14	3.40	1		
Print Resources	18.95	5.79	0.278**	1	
Non Print Resources	23.90	4.05	0.266**	0.031	1

It is shown from above table that there was significant relationship between print resources and research productivity among Librarians in private universities in Southwest Nigeria( $r = .278^{**}$ ,  $N= 109$ ,  $P < .05$ ). Hence, print resources had an influence on research productivity in the study. Also there was significant relationship between non-print resources and research productivity among Librarians in private universities in Southwest Nigeria( $r = .266^{**}$ ,  $N= 109$ ,  $P < .05$ ). Hence, non-print resources had an influence on research productivity in the study.

**Summary of Major Findings**

The following major findings were established after the analysis of data retrieved from the respondents in the study.

1. Print resources available in the academic libraries include textbooks, journals, dictionaries, encyclopedias, maps, reference books, directories atlases and reference books but librarians in their quest for research productivity mainly used are textbooks, newspapers, atlases and directories.



2. The study revealed that majority of the librarians consulted electronic books, electronic encyclopedias, online public access catalogue and online conference proceedings for their research.
3. Furthermore, the study revealed that research resources that contributed to librarians' research productivity were mainly journal articles, co-edited books published and conference paper presentation respectively.
4. The study also revealed that library orientation, awareness of electronic resources and level of availability and accessibility on resources were major factors influencing the use of print and non-print resources in academic libraries.
5. Publication cost, lack of research orientation and high cost of internet access were the major challenges facing librarians in their research productivity.
6. Finally, print resources had an influence on research productivity in the study. Also, there was significant relationship between non-print resources and research productivity among librarians.

## **Conclusion**

This section presents the conclusions of the study which are based on the findings of each research objectives of the study, as follows: use of print resources and non-print resources; extent of research productivity among librarians; factors influencing use of print and non- print resources on research productivity and

to determine the challenges librarians faced in using print and non-print resources in their quest for research productivity in private universities in Southwest Nigeria.

The available Print resources in the academic libraries include textbooks, journals, dictionaries, encyclopedias, maps, reference books, directories atlases and reference books but librarians in their quest for research productivity mainly used are textbooks, newspapers, atlases and directories. Majority of the librarians consulted electronic books, electronic encyclopedias, online public access catalogue and online conference proceedings for their research; and it was revealed that research resources that contributed to librarians' research productivity were mainly journal articles, co-edited books published and conference paper presentation respectively.



Publication cost, lack of research orientation and high cost of internet access were the major challenges facing librarians in their research productivity.

Lastly, there is significant relationship between non-print resources and research productivity among librarians in the studied area.

### **Recommendations**

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

1. Librarians should be trained on how to write good proposal which will help them to cultivate the habit of writing proposal for grants internationally, even outside the university, this will solve the problem of insufficient fund for research and publication.
2. Higher institutions of learning should promote the culture of research because it will increase the number of people writing books and journals and reduce the level of plagiarism and book theft.
3. Research findings by librarians should be subjected to peer review from learned colleagues before submitting them for publication.
4. The academic libraries should try as much as possible conduct training, seminars as means to increase print and electronic information resources awareness, access and use.
5. Time management should be inculcated by the librarians in order to have time to study and research.



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