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INFLUENCE, ACCESSIBILITY AND USE OF ELECTRONIC INFORMATION RESOURCES AS CORRELATE OF RESEARCH OUTPUT OF ACADEMIC LIBRARIANS IN FEDERAL UNIVERSITIES IN NORTH CENTRAL NIGERIA

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Abstract
This paper assessed the influence, accessibility and use of electronic information resources as correlate of research output of librarians in Federal Universities in north central Nigeria. The study was guided by three objectives and three corresponding research questions. Survey research design method was adopted for the study. The total population for the study was 119 professional librarians in seven Federal Universities in north central Nigeria. Therefore, total enumeration or census was used since the population was manageable. Questionnaire and observation checklist were the instruments used for data collection. One hundred and sixteen copies of questionnaire were returned and used for the analysis. Statistical tool such as frequency counts and percentages, mean and standard deviation were used to analyzed the data. The result of the analysis revealed that the use of electronic information resources is highly influenced and accessible in Federal Universities in north central Nigeria, but the level of usage by librarians for effective research output is minimal due to library routine. The study revealed further that research output of librarians are published in professional journals, conference proceedings, experimental designs, writing of book or book chapter, writing of monograph, producing works of artistic and creative nature, engaging in public debate and commentaries, exhibiting editorial duties, obtaining patent and licenses in terms of inventions and many more. The major challenge faced by librarians in Federal Universities in North central Nigeria was lack of time due to library routine tasks. This study concluded that most librarians in Federal Universities in North central Nigeria are highly influence and have access to the use of electronic information resources but do not maximize these resources effectively and efficiently for their research output/productivity. Hence, this study recommended that librarians' routine task should be minimized so that they can have time to embark on research activities using the electronic information resources.

Keywords: Accessibility, Federal Universities, Information Resources, Influence, Librarians, North Central Nigeria, Research Output, Use of Electronic.

Introduction

Research output of librarians is the extent to which librarians engage in their own research and publish articles in refereed journals, conference proceedings, writing of book or book chapters, producing works of artistic and creative nature,

gathering and analyzing original evidence as primary source, writing of monographs, developing experimental designs, engaging in public debate and commentaries, working with postgraduate students on dissertations and class projects, obtaining research grants, carrying out editorial duties, obtaining patents and licenses in terms of inventions many more. According to Okeji, (2018) that for an academic librarian to be competitive in the academic environment, librarians, like other faculty members, have received more and more pressure to do research and to show record of publications. The more research output is published in formats, the more the probability of the influence, accessibility and use of electronic information resource is assured. According to (Okato, 2011). Research output is a means through which librarians contribute new knowledge to the existing body of knowledge. Research output of librarians is worthy of focus as the quality and quantity of their publications are a determining factor in their performance evaluation.

Research output plays a major role in attaining success in the academia as it relates to promotion, tenure and salary of librarians. According to Halison, Iwu-James, Soyemi and Madukoma (2020) for academic librarians, research has become a significant index or determinant of their appointment, promotion / career advancement, reputation and academic acceptance. It has also been reported that the quality of research output by academia in any University system depends largely on the quality and quantity of information resources at their disposal. Powell (2010) maintains that research and publication help individuals to think critically and analytically. Librarians in academic libraries are considered as academic staff, so engaging in research has become an expected activity on their part.

In another related study. Oduwole and Ikhizama (2010) use survey method to ascertain research output of librarians in Nigerian agricultural research institutes. They found out that research output provides a good platform for librarians to become successful academicians. This is because research develops their knowledge and reinforces the skills needed for effective knowledge transfer. It has become highly necessary for universities to invest more on access to information resources especially electronic information resources.

Haridasan and Khan (2009) Maintained that electronic information resources refer to information bearing materials that provide access to users in a digital or in an electronic format. Electronic information resources also have been viewed as a resource in which information is stored electronically and accessed through electronic systems and networks. Electronic information resources have many functions and benefits which can be of immense use to librarians. Once a user is connected to the Internet such user can link up with any part of the world for whatever purpose the user has in mind, Okiki & Asiru, (2011) view electronic resources as the product of information communication technologies which are found relevant to aid librarians' performance and research process in the Universities. Electronic Information Resources has brought about innovation in librarianship where access to information is made possible to library users beyond the physical boundary of the University library. According to Pullinger (2012) the academic information environment has changed for both librarians and patrons, since most of the information resources are now available in electronic format, the electronic information resources have unprecedented contribution on library collections.

The influence, accessibility and use of electronic information resources is very important for the research output of academic librarians in Federal and other Universities in north central Nigeria, because it is perceived that when these resources are accessible and used, they contribute to greater research output of academic

librarians and the development of the library as whole. When electronic information resources are influence, accessible and not use, it may hamper the research output of academic librarians. This reason informed the need to examine and assessed the influence, accessibility and use of electronic information resources on research output of academic librarians in Federal Universities in north central Nigeria. In another related study. Oduwole and Akpati (2013) investigated the influence of electronic information resources at the University of Agriculture library, Makurdi, Benue state, Nigeria. The study revealed that most members of the University community attest to having available electronic resources and it was easy to access and use electronic information resources to satisfy their research outputs.

Electronic information resources are in digitised format which requires the use of computers and internet connectivity. Accessibility and Use of these resources are influenced by various factors. However, because of the flexibility of electronic information resources, they have added advantage over print materials in research conduction. Thus, the ease with which electronic information resources is accessed and used needed information significantly to influence publication output of librarians and this in turn has great impact on the research output of librarians in Federal Universities in North Central Nigeria.

Statement of the Problem

Research output contributes towards image building for universities as well as their ranking. It is a criterion that is used for the promotion and tenure of academic librarians in universities and other institutions of higher learning in Nigeria. Just like the saying goes for young academics; if you don't publish, you perish. So also, it applies to academic librarians. This is the foundation of their carrier progression.

More so, most academic libraries in Nigeria have subscribed to many electronic information resources and even acquired some for use in their respective libraries. Yet, the output of most academic librarians is still low when compared to that of their counterparts in the developed world.

However, it seems likely that librarians record low research output, this low research output could be librarians' inability to access and use adequate electronic information resources available to them and poor data interpretation skills for effective research output. Therefore, this study sought to examine the influence, accessibility and use of electronic information resources as correlates of research output of academic librarians in Federal Universities in North Central Nigeria.

Objectives of the Study

The objectives of the study are to:

1. determine the research output of academic librarians in Federal Universities in North Central Nigeria.
2. determine the influence of using electronic information resources on the research output of academic librarians in Federal Universities in North central Nigeria.
3. identify factors militating against the research output of academic librarians in Federal Universities in North central Nigeria.

Research Questions

The following research questions are postulated to guide the study:

1. What are the research output of academic librarians in Federal Universities in North central Nigeria?
2. What is the influence of using electronic information resources on the research output of academic librarians in Federal Universities in North central Nigeria?

3. What are the factors militating against the research output of academic librarians in Federal Universities in north central Nigeria?

Hypotheses

The following null hypotheses were formulated to guide this study and tested at 0.05 level of significance:

1. There is no significant correlation between electronic information resources and research output of academic librarians in Federal Universities in North Central Nigeria.
2. There is no significant influence on the use of electronic information resources on the research output of academic librarians in Federal Universities in North Central Nigeria.
3. There is no significant relative contribution of the influence, accessibility and use of electronic information resources on the research output academic of librarians in Federal Universities in North Central Nigeria.

Review of Related Literature

According to Sudhier and Abhila (2011), research output is expressed by the number of papers published by a selected unit in a given time. A well-known research output indicator is the number of publications produced by librarians within a given time. This is asserted by Josphine, Oyemike and Fidelia (2019) that the progression of librarians in university libraries from one cadre level to another places a demand on them to have number of papers published in both local and international journals, combine with papers presented at both local and international conferences. Research output are tangible output of research publications in professional journals, conference proceedings, writing of books or book chapters, producing works of artistic or creative nature, gathering and analyzing original evidence as primary source, writing of monographs, developing experimental designs, engaging in public debate and commentaries, working with postgraduate students on dissertations and class project, carrying out editorial duties, obtaining patent and licenses in terms of inventions. Research output can be shared through publications in professional journals, Conference proceedings. In a related study by Okonedo (2015). He examined research output and publications of librarians in public Universities in South –West, Nigeria. A descriptive survey research method was employed for the study. The purposive sampling method was used to select 11 out of 16 public Universities in the South-West Nigeria. All the librarians in the 11 public Universities were covered using total enumeration method. The sampled public Universities comprises 6 Federal and 5 state Government Universities in South-West, Nigeria. Questionnaires was used to collect data from respondents. One hundred and sixty-six (166) copies of the questionnaires were administered and 144 were collected retrieved given a response rate of 85.5%.

However, the research only covered Universities in South-West, Nigeria. This prompted the research work at hand as it seeks to study the influence, accessibility and use of electronic information resources and research output of librarians in Federal Universities in North Central Nigeria. The findings is in direct contrast with the study of Okiki (2012) who conducted a related study that dwells on research output of faculty members in Nigeria Federal Universities. The study adopted descriptive survey design called correlation type. It established the relationship between socio-demographic characteristics and research output of faculty members in Nigeria Federal Universities. The population of the study consisted of academic staff working in all Federal Universities in Nigeria.

In a similar study by Ogbomo (2010), librarians research output is influenced by the eagerness or enthusiasm to publish for greater research output. Professional journals are scholarly publications addressed to a particular professional audience such as Doctors, lawyers, teachers, engineers, or accountants and published by a professional organization. They may contain research articles applicable to the profession. In the opinion of Isah, A (2010), it is clear that librarians build and disseminate knowledge in professional journals, through the publication of research and research can provide important background for librarians to become successful academicians. Research output of librarians can be measured as publication count. It is the total number of productivities generated by a system and the input provided to create an output, this include efficiency more especially effectiveness, this is to ensure that the producer production process is working effectively or not. Thomsson Reuters (2011). Publication of electronic information resources for research output of librarians is central to scholarly activity and recognition in academic community. However, conference proceedings is the published record of a conference, congress, symposium, or other meetings sponsored by a society or association, usually but not necessarily including abstracts or report of papers presented by the participants. Another way of sharing research output is by writing of book or book chapters. Okiki (2012) conducted a related study that dwells on research output of faculty members in Nigerian Federal Universities. It established the relationship between socio-demographic characteristics and research output of faculty members in Nigeria Federal Universities. In a similar study by Ansari M.N and Bushra, (2010). Electronic information resources play vital roles in helping librarians in their quest to support the teaching and learning process at the university level and to provide quality assistance in research productivity.

Methodology

The study adopted descriptive survey research method called correlation. Sharma (2017) stated that descriptive survey research method deals with describing the situation of a given population using some characteristics or features common among them. These involves planning the survey, questionnaire design sampling, data collection, data processing and drawing conclusion. Descriptive survey research design is concerned with the collection of data and describing in systematic manner, the characteristics, features or facts about a given population. The survey research design is relevant for this study because it is relatively cheap and serve as a fast way of collecting information and data on the availability, accessibility and use of electronic information resources as correlate of research output of academic librarians in Federal Universities in North central Nigeria. The population of the study consisted of 119 academic librarians in Federal Universities libraries in North Central Nigeria. Total enumeration or census was done because the population size was manageable.

Population of the Study

S/N	Name of University	No. of Academic Librarians
1.	University of Ilorin	24
2.	University of Jos, Plateau State	21
3.	Federal University of Technology, Minna	29
4.	Federal University of Agriculture, Makurdi	11
5.	University of Abuja	12
6.	Federal University Lafia	10
7.	Federal University Lokoja	12
	Total	**119**

Source: 2019 Research Survey

Sample and Sampling Technique

The research adopted the total population for this research work. This means that the researcher used total enumeration with reason being that the population of the study area is not too enormous. This is in conformity with Benard (2012) who asserted that if the population of a study is less than two hundred, the researcher should adopt the entire population without sampling. Hence, the researcher used the entire population since it is manageable without sampling. Since census population was used, there is no sampling technique employed.

Data Analysis and Discussion

Table 1: What are the research output of academic librarians in Federal Universities in North Central Nigeria?

Statement	SA 4	A 3	D 2	SD 1	FX	$\bar{X}$	STD	Decision
I enhance my research output by publishing in professional journals	79 (70.5)	33 (29.5)	0(0.0)	0(0.0)	415	3.71	0.46	Agreed
I enhance my research output by participating in conference proceedings	77 (68.8)	35 (31.3)	0(0.0)	0(0.0)	413	3.69	0.47	Agreed
I enhance my research output by writing in books and contributing in book chapters	64 (57.1)	48 (42.9)	0(0.0)	0(0.0)	400	3.57	0.50	Agreed
I enhance my research output by producing works of artistic and creative nature	61 (54.5)	49 (43.8)	2(1.8)	0(0.0)	395	3.53	0.54	Disagree
I enhance my research output by gathering and analysing original evidence as primary source	82 (73.2)	30 (26.8)	0(0.0)	0(0.0)	418	3.73	0.44	Agreed
I enhance my research output by contributing in writing of monographs	78 (69.6)	31 (27.7)	3(2.7)	0(0.0)	411	3.67	0.53	Agreed
I enhance my research output through experimental designs	63 (27.7)	46 (41.1)	3(2.7)	0(0.0)	396	3.54	0.55	Disagree
I enhance my research output by engaging in public debate and commentaries	53 (47.3)	48 (42.9)	11 (9.8)	0(0.0)	378	3.38	0.66	Disagree
I enhance my research output by working with postgraduate students on dissertations and class project	79 (70.5)	31 (27.7)	2(1.8)	0(0.0)	413	3.69	0.50	Agreed
I enhance my research output by carrying out editorial duties, obtaining patent and licences in terms of inventions	68 (60.7)	38 (33.9)	6(5.4)	0(0.0)	398	3.55	0.59	Disagree
Overall Mean					**3.61**			

From this table, values in the parenthesis are percentages of the frequency counts. SA= Strongly Agree, A= Agree, D= Disagree and SD= Strongly Disagree. Decisions are made to each response base on the overall mean 3.61.

Note: *Decision Rule: mean values less than 3.61 are rejected, while those greater than or equal to 3.61 are Accepted.*

The result from Table 1 shows the frequency of research output of academic librarians in Federal Universities in North Central Nigeria. From the table, the researcher observed that in each case of the statement, a larger percentage of the

sampled respondents Strongly Agreed and ***Accepted*** the following statement; I enhance my research output by publications in professional journals, I enhance my research output by participating in conference proceedings, I enhance my research output by gathering and analysing original evidence as primary source, I enhance my research output by contributing in writing of monographs and I enhance my research output by working with postgraduate students on dissertations and class project. While they ***Rejected*** the following statement I enhance my research output by writing in books and contributing in book chapters, I enhance my research output by producing works of artistic and creative nature, I enhance my research output through experimental designs, I enhance my research output by engaging in public debate and commentaries, I enhance my research output by engaging in public debate and commentaries and lastly I enhance my research output by carrying out editorial duties, obtaining patent and licences in terms of inventions.

Table 2: What is the influence of using electronic information resources on the research output of academic librarians in Federal Universities in North Central Nigeria?

Statement	**SA** 4	**A** 3	**D** 2	**SD** 1	**FX**	$\bar{X}$	**STD**	**Decision**
Influence of electronic information resources enhances research output of academic librarians	99 (88.4)	13 (11.6)	0(0.0)	0(0.0)	435	3.89	0.32	Agreed
Influence of electronic information resource is an essential tool for learning, research, teaching and consultancy for greater research output	92 (82.1)	20 (17.9)	0(0.0)	0(0.0)	428	3.82	0.39	Agreed
Influence of electronic information resources provide access to current information, save time and able to update frequently	110 (98.2)	2 (1.8)	0(0.0)	0(0.0)	446	3.98	0.13	Agreed
Influence of electronic information resources offers search capability, flexibility and result for greater research output	95 (84.8)	17 (15.2)	0(0.0)	0(0.0)	431	3.85	0.36	Agreed
The influence of electronic information resources provides access to information that can broaden the mind of librarians when embarking on research that leads to greater research output	101 (90.2)	11 (9.8)	0(0.0)	0(0.0)	437	3.90	0.30	Agreed
Overall Mean						**3.89**		

From this table, values in the parenthesis are percentages of the frequency counts. SA= Strongly Agree, A= Agree, D= Disagree and SD= Strongly Disagree. Decisions are made to each response base on the overall mean 3.89.

Note: *Decision Rule: mean values less than 3.89 are rejected, while those greater than or equal to 3.89 are Accepted.*

The result from Table 2 shows the frequency on the relationship between the influence of electronic information resources and research output of academic librarians in Federal Universities in North Central Nigeria. From the table, the researcher observed that in each case of the statement, a larger percentage of the sampled respondents Strongly Agreed and ***Accepted*** the following statement; The influence of electronic information resources enhances research output of academic librarians. The influence of electronic information resource is an essential tool for learning, research, teaching and consultancy for greater research output, The influence of electronic information resources provide access to current information, save time and able to update frequently. The influence of electronic information resources offers search capability, flexibility and result for greater research output and the influence of electronic information resources provides access to information that can broaden the mind of librarians when embarking on research that leads to greater research output. The respondents have high rate of ***Acceptance*** to Influence of electronic information resources provide access to current information, save time and able to update frequently and the influence of electronic information resources provides access to information that can broaden the mind of librarians when embarking on research that leads to greater research output. While they fail to ***Rejected*** other statements with their mean slightly less than the overall mean 3.89 with insignificant decimal figures.

Table 3: What are the challenges militating against the research output of academic librarians in Federal Universities in North Central Nigeria

Statement	SA	A	D	SD	FX	$\bar{X}$	STD	Decision
	4	3	2	1				
Lack of fund to facilitate robust and reliable internet connectivity affect research output negatively	102 (91.1)	10 (8.9)	0(0.0)	0(0.0)	438	3.91	0.286	Agreed
Lack of adequate power supply is one of the factors militating against research output	104 (92.9)	8 (7.1)	0(0.0)	0(0.0)	440	3.93	0.259	Agreed
Lack of telecommunication infrastructure slow down research output	96 (85.7)	16 (14.3)	0(0.0)	0(0.0)	432	3.86	0.351	Agreed
Poor level of utilization of internet facilities among policy makers, Government officials and the ruling class have an effect on research output	94 (83.9)	18 (16.1)	0(0.0)	0(0.0)	430	3.84	0.369	Disagree
Lack of time and inadequate data interpretation skills affect librarians research output	88 (78.6)	24 (21.4)	0(0.0)	0(0.0)	424	3.79	0.412	Disagree
Overall Mean						**3.86**		

From the table, values in the parenthesis are percentages of the frequency counts. Decisions are made to each response base on the overall mean 3.86. SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree, FX= Weighted Sum and $\bar{X}$ = Mean

Note: *Decision Rule: mean values less than 3.86 are regarded as low level of awareness, while those equal to 3.86 are regarded as award and those greater than 3.27 are highly awarded.*

The result from Table 3 shows the challenges militating against the research output of librarians in Federal Universities in North Central Nigeria. From the table, the researcher observed that in each case of the statement, a larger percentage of the sampled respondents Strongly Agreed and ***Accepted*** the following statement; Lack of fund to facilitate robust and reliable internet connectivity affect research output negatively, Lack of adequate power supply is one of the factors militating against research output and Lack of telecommunication infrastructure slow down research output. While they ***Rejected*** the following statement Poor level of utilization of internet facilities among policy makers, ruling class have an effect on research output and Lack of time and inadequate data interpretation skills affect academic librarians research output.

Conclusion

From the findings of the study, it could be deduced that no librarian can achieve its goal and objective without the influence, accessibility and use of electronic information resources for effective research output in the recent knowledge–based society. However, the need for universal access and use of electronic information resources is imperative for academic librarians to redefine their stand in terms of research output with the influence, accessibility and use of electronic information resources. It is obvious from the finding of this study that most librarians in universities in north central Nigeria have access to electronic information resources but they are not adequately using these resources for effective research output. In addition to the findings of this study, quite a lot of electronic information resources were influence, accessible and frequently used in Federal Universities in north central Nigeria. In spite of this fact, the study documented some challenges facing academic librarians in using these resources. As deduced in this study, the librarians have access to electronic information resources and use them for other purposes.

Recommendations

Based on these findings, the following recommendations are made:

1. In making electronic information resources influential, accessible for use, librarians in the study areas should liaise with university management to provide access to electronic information resources through online subscription of data for browsing, increase in interest bandwidth, constant electricity, paying utility bills as when due and provision of conducive environment for research work and productivity.
2. Librarians' routine task should be minimized by the university management so that they can have time to embark on research activities which will in turn boost University image.
3. Librarians in the under-study areas should try as much as possible to publish in patent, certified invention and scientific peer-reviewed.

References

Ansari, M. N. and Bushra (2010). Use of electronic resources among academics at the University of Karachi. *Library Philosophy and Practice*. 4-5.

Aramide, K.A., and Bolarinwa, O. M. (2010). Availability and use of audio-visual and electronic resources by distance learning students in Nigerian universities: A case study of National Open University of Nigeria (NOUN), Ibadan Study Centre. *Library Philosophy and Practice.* Retrieved April 13, 2016 from http://unllib.unl.edu/LPP/aramide-bolarinwa.htm.

Benard J. (2012). Perfecting your research work. London: Unique Press Information Service.21-33.

Candela, O. and Angel, B. (2010). Librarians' perceptions on the use of electronic resources at Catalan academic libraries Results of a focus group. *New Library World, 111*(1/2), 46-54.

Chiemeke, S., Longe, O. B., Longe, F. A. and Shaib, I. O. (2009). Research outputs from Nigerian tertiary institutions: An empirical appraisal. *Library Philosophy and Practice*. Available at: http://www.webpages.uidaho.edu/~mbolin/chiemeke-longe-shaib.pdf

Ibegbulam, Ijeoma J. & Jacintha, Eze U. (2016). Factors That Contribute to Research and Publication Output Among Librarians in Nigerian University Libraries. *The Journal of Academic Librarianship*, 42(1), 15–20. doi:10.1016/j.acalib.2015.09.007

Egberongbe, H. S. (2011). The use and impact of electronic resources at the University of Lagos. *Library Philosophy and Practice (e journal).* Retrieved from http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1490&context=libphilprac

Ekwelem, V. O., Okafor, V. N. & Ukwoma, S. C. (2009). Students' use of electronic information sources at the University of Nigeria, Nsukka. *African Journal of Library, Archives and Information Science 19* (1),89-97.

Haliso, Y. L., Iwu-james, J., Soyemi, O. D. & Madukoma, E. (2020) Promoting research productivity among librarians: the intervening role of institutional support. *Covenant Journal of Library & Information Science (CJLIS) Vol. 3 No 2,* retrieved from https://journals.covenantuniversity.edu.ng

Haridasan, S. and Khan, M. (2009). Impact of e-resources by social scientists in National Science Documentation (NASSDOC), India. *The Electronic Library 27* (1), 117-133.

Igbokwe, J.C, Victor Benson, O, & Enem, F.N, (2019) Determinants of the Quality of Research Outputs by Librarians in Selected University Libraries in South East Nigeria. *Journal of Information and Knowledge Management Vol. 10 (1),* Retrieved from https://dx.doi.org/10.4314/iijikm.v10i1.1

Isa, A. (2010). Information dissermination in scholarly publications and the use of library service at Michael Opara University of Agriculture. Library philosophy and practice. Retrieval. December 10, 2012.

Mahmood, I., Hartley, R., & Rowley, J. (2011). Scientific communication in Libya in the digital age. *Journal of Information Science 37* (4), 379-391.

Oduwole Akpati (2013). Survey method to ascertain research output of librarians in Nigeria research institute. (e- journal) paper 220, 8-15.

Okato, E.F. (2011) Publication output of librarians in tertiary institutions: A case study of Delta State University, Abraka, Nigeria. Library Philosophy and practice (e-journal) paper 3221-9. Received on 27/4/2016 from http:/ digitalcommons.unl.edu/libphilpra/322

Ogbomo, E. F. (2010). Publication output of librarians in tertiary institutions: A case study of Delta State University, Abraka, Nigeria. *Library Philosophy and Practice* (e-journal) Paper 322 1-9. Received on 27/4/2016 from http://digitalcommons.unl.edu/libphilprac/322

Okeji, C. C. (2018). Research output of librarians in the field of library and information science in Nigeria: a bibliometric analysis from 2000-March, 2018. Collection and Curation, (), CC-04-2018-0012–. doi:10.1108/cc-04-2018-0012

Okiki, O. C. (2012). Research productivity of teaching faculty members in Nigerian federal universities: An investigative study. *Chinese Librarianship: an*

International Electronic Journal, 36. URL: http://www.iclc.us/cliej/cl36okiki.pdf

Okonedo1, S., Popoola, S. O., Oluwafemi, S. E. & Bamigboye, O. B. (2015). Correlational analysis of demographic factors, self-concept and research productivity of librarians in public universities in South-West, Nigeria. *International Journal of Library Science 4*(3),43-52.

Powell, R. R., Baker, L. M. and Mika, J. J. (2010). Library and information science practitioners and research. *Library and Information Science Research 24* (1),49-72.

Pullinger, D. & Brain, S. (2011). The Electronic journal research techniques report paper. *British Library Research Development.*

Sharma (2017). Purpose and characteristics of descriptive survey for quantitative research and social research survey. Journal of management studies 2 (4).

Sudhier, K .G. & Abhila, I. S. (2011). *Publication productivity of social scientists in the centre for development studies, Thiruvananthapuram: A Bibliometric analysis proceedings of the 8th International CALIBER* - 2011, Goa University, Goa, March 02-04 2016.

Thomson Reuters (2011). The integration of information and communication technology in library operations towards effective series, proceedings of the first international technology. Education and environment conference. African society for scientific research (ASSR). Human resources management academic research society 620-628.