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## **INFLUENCE OF INTERNET CONNECTIVITY AND COLLABORATION ON THE RESEARCH PRODUCTIVITY OF LIBRARIANS IN COLLEGES OF EDUCATION IN NIGERIA**

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### **ABSTRACT**

*The study examined the influence of internet connectivity and collaboration among colleagues as influencing factors on the research productivity of librarians in colleges of education in Nigeria. Research design used for the study is survey. Total enumeration was used to cover all the 356 librarians in the 63 public colleges of education that existed in Nigeria as at 2012. Two (2) instruments were used to collect data. The instruments are: Librarians' productivity scale ( $r=0.71$ ) and Librarians' environmental scale ( $r=0.88$ ). Statistical package of social science (SPSS) was used to analyse the collected data. Finding from the study revealed that the publications output of majority of the librarians was far below average and that internet connectivity and synergy among colleagues had positive correlation on research productivity of librarians in colleges of education in Nigeria. It is recommended amongst others that the authorities of the colleges of education in Nigeria should do everything possible to optimise the research productivity of the librarians and no effort should be spared to connect their offices to functional internet services.*

**Keywords:** Internet Connectivity, Collaboration, Research Productivity of Librarians, Colleges of Education in Nigeria.

### **1. INTRODUCTION**

Research productivity is the research output compared with inputs (money, time, facilities, researchers' and teams' efforts) within a specific period of time. It

is an outcome measurement of scholarly effort and has two components that are: knowledge creation (research) and knowledge distribution (productivity). Research productivity can include research publication in professional journals and in conference proceedings, writing a book or chapter, gathering and analysing original evidence, obtaining research grants, carrying out editorial duties, obtaining patents and licences, writing monographs, developing experimental designs, producing works of an artistic or creative nature, engaging in public debates and commentaries. Several institutions policy for promotion as well as their tenure and reward systems is based on quantity and quality of research productivity, teaching and service.

High status institutions place great emphasis on the relationship between research productivity and rewards. Research productivity is not only important as a route to academic promotion, it is also important for enhancing an institution's reputation and economic status (Blackburn et al 1991). Apart from meeting the criteria for tenure and promotion; research productivity comes with other attracted benefits which serve as motivation for librarians and other faculties. Some of the benefits include: Study leave with pay; separate academic salary scale; journal allowances; conference attendance; research grant and sabbatical leave (Ochai, 1998). Librarians produce different types of publications and products; including newsletters, journals, bulletins, fact sheets; reports; summaries; guides; conference proceedings; books; bibliometric, etcetera. Different types of publications have different purposes and a different audience.

The publication requirement for information is an entirely new one for librarians in Nigeria. Previously, libraries had only three requirements for promotion which include: 2 – 4 years since last promotion; availability of vacancies; and certificatory performance. The benefits of publication notwithstanding; librarians are motivated to engage in publication for various reasons. Ochai and Nedosa (1998) revealed that publication is motivated by: eagerness or enthusiasm to publish; presence of enabling environment; and self-perception of individual librarians with respect to their role. Such self-perception, according to Avemariatulu (2005), is a product of education and skills acquired in the early days of professional practice which also determine the ability to produce scholarly papers. One of the motivating factors for scholarly publications by librarians is the availability of other publications which contain the needed language for publication and how to use them.

The academic world is centred on the notion of publication as the basic means to disseminate results, foster interaction among communities and achieve international recognition (and career advancement). Publications are done in conferences or journals and are usually reviewed by a committee of experts also referred to as peers. Quality papers are then accepted for publication. Acceptances of papers for publications in conferences and journals have the following advantages. Through publication and review, papers are made known to colleagues and the review process is supposed to ensure that the best papers are now visible so that researchers know where to go if they want to read literature on certain topics. Moreover, having papers accepted at prestigious conferences and journals is a way to prove (in theory) that the work is

valuable. Finally, publications and conference participation leads to exchange of ideas with colleagues and to networking (Ball, 2006).

Reviewing and acceptance of papers for publications are often bedevilled with some bottlenecks. The reviewing process at times kills good papers. The reviewing process is not easy and it is rarely done properly. The major problems that are associated with paper review process are the following: One, it is difficult to judge the impact of a paper. Even smart people and great researchers have a hard time assessing whether a topic is interesting and relevant and likely to have an impact. Moreover, good papers are cut because of bad reviews.

In addition, there are reviewers who are generally more negative and some that are more positive. Furthermore, reviewing takes time and is not necessarily time those results in better papers. Finally, some review procedures require detailed studies rather than more innovative and creative papers. (Rodriguez, Bolle, Sompel, 2006).

Apart from the afore discussed bottlenecks, the research productivity of academic librarians could be influenced by the extent of internet connectivity and research synergy among peers. For instance, if the office of a librarian is connected to the Internet, there is the likelihood that his research productivity would receive a boost than his colleague who does not have functional internet facilities. Evidences are rife on the impact of internet services on research activities and other academic exercise in academic communities of developed and industrialised societies of the world. The academic communities of North America, Japan and Europe are becoming increasingly reliant on the use of Information and Communication Technology, particularly computer and Internet facilities in promoting research activities for subsequent national development (Udoh, 2001; Ughegbu 2001; Slabbert, 2006). In Nigeria, for the academia to participate maximally in contemporary international ICT development – in terms of the utilisation of Internet services for teaching and research activities – the academic community must go beyond just the use of e-mail and browsing on the Internet to utilising other packages like workshop, e-conference and e-learning opportunities which can facilitate, speed up and improve the quality and quantity of teaching and research activities. (Okafor, Imhonopi, and Urim, 2011)

Furthermore, in an investigative study carried out in South – Western Nigeria, Okafor, Imhonopi, and Urim (2011) found a positive correlation between the publications output of the respondents and Internet services. Their findings revealed that the advent of Internet services and tools increased the volume of respondents research output. The study revealed that the utilisation of Internet services aided the respondents to publish their works (54.3%), to attend conferences (61.6%) and to improve both the quality of their teaching (74.2%) and the quality of their research output (79.1%). Moreover, respondents recorded an improved research output in terms of books, chapters in books, monographs and journal articles from when they began to use Internet services compared to their research output prior to the implementation of computers and Internet services at their institutions.

Apart from Internet connectivity the research productivity of librarians could be influenced by collaboration among peers. By collaborating with understanding colleagues, the research productivity of the librarian could receive a boost. Publishing quality articles in the information age would require a lot of synergy among co-operating colleagues. For instance, one of the colleagues could get the research topic. The other person could work on research design while another partner could look for possibilities of funding the research. Leach, Melicher, Oswald and Hermers (2000) established that co-authoring arrangements with peers (rather than sole-authoring) have significantly higher career output in the highest quality finance journals. Similarly, Akakandelwa (2009) established a positive relationship between author research productivity and author collaboration.

The research productivity of the librarians could suffer a serious setback if the librarian is not connected to the Internet; the Internet is disabled or permanently epileptic. Similarly, if the librarian is all knowing, all energetic and all resourceful to the extent that he does not feel that he needs to collaborate with any of his colleagues while carrying out researches his productivity could be abysmally low. In other words Internet connectivity and collaboration among colleagues could influence the research productivity of librarians including the ones in colleges of education in Nigeria.

## **2. STATEMENT OF THE PROBLEM**

One of the major criteria for promoting the academic staff including librarians in colleges of education in Nigeria is research productivity (Buttler, 1991 and Mularski and Bradigan, 1991, ACRL and ALA, 2001). Moreover, research productivity promotes advancement and recognition for librarians and librarians who conduct research have a more effective relationship with other faculty. (Montanelli and Stenstrom, 1986). However, in spite of the benefits of publications to librarians, some of them do not conduct enough research (Powell 1997, Ononhwakpor and Tiemo, 2006). The low research productivity of the librarians could have been due to any of the following factors. One, poor technological facilities in the work environment in form of disabled Internet facilities coupled with epileptic public power supply could adversely affect the research productivity of librarians (Blick, 1984, Hart 1999, Sedikadiwa, 2005). Moreover, lack of collaboration with research active mentors or peers could also influence the research productivity of librarians adversely. The study, therefore examined the influence of internet connectivity and collaboration among colleagues on the research productivity of librarians in colleges of education in Nigeria.

## **3. OBJECTIVES OF THE STUDY**

The main objective of the study is to investigate the influence of Internet connectivity and collaboration on the research productivity of librarians in colleges of education in Nigeria. The specific objectives are to:

- Determine the research productivity of librarians in colleges of education in Nigeria.

- Determine if internet connectivity influences the research productivity of librarians in colleges of education in Nigeria.
- Ascertain if collaboration influences the research productivity of librarians in colleges of education in Nigeria.

#### **4. RESEARCH QUESTIONS**

To achieve the foregoing objectives, the following research questions were posed and answered in this study.

- How productive are librarians in colleges of education in Nigeria in terms of research Productivity?
- To what extent will internet connectivity influence the research productivity of librarians in colleges of education in Nigeria?

#### **5. HYPOTHESES**

The following null hypotheses were tested at 0.05 level of significance.

- Ho1: Internet connectivity will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- Ho2: Collaboration with colleagues will not significantly influence the research productivity of librarians in colleges of education in Nigeria.

#### **5. SCOPE OF THE STUDY**

The study covered all the public colleges of education in Nigeria and the librarians that are found in these institutions. It also covered the extent to which librarians are productive in terms of research productivity and the extent to which internet connectivity and collaboration among colleagues influenced the productivity of librarians in colleges of education in Nigeria. Private colleges were exempted because they do not have common labour policy that could influence the research productivity of the librarians.

#### **6. RESEARCH METHODOLOGY**

Research design used for the study is survey. Total enumeration was used to cover all the 356 librarians in the 63 public colleges of education that existed in Nigeria as at 2012. Two instruments were used to collect data. The instruments are: Librarian's productivity scale ( $r=0.71$ ) and Librarians environmental scale ( $r=0.88$ ). The two instruments were subjected to content and face validity. Data were collected personally by the researcher in conjunction with six (6) trained research assistants. Statistical package of social science (SPSS) was used to analyse the collected data.

#### **7. PRESENTATION AND ANALYSIS OF DATA**

Research Question 1: How productive are librarians in colleges of education in Nigeria in terms of research productivity?

**Table 1:** Productivity of Librarians in Colleges of Education in Nigeria in Terms of Research Productivity

Quantity of Publications	None		One		Two		Three		More than three	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Number of articles published by the librarian in professional journals in the past three years.	103	34.9	45	15.3	77	26.1	59	20.0	11	3.7
Number of articles published by the librarian in professional journals since he/she began his/her career.	102	34.6	27	9.2	32	10.8	26	8.8	108	36.6
Number of professional conferences/ seminars/ workshops in which the librarian has presented papers in the past three years.	105	35.6	73	24.7	47	—	54	18.3	16	5.4
Number of chapters in books that the librarian has contributed in the past three years.	157	53.2	53	18.0	43	14.6	36	12.2	6	2.0
Number of professional/academic journals that the librarian has co-authored with colleagues.	209	70.8	33	11.2	26	8.8	13	4.4	14	4.8
Number of professional/academic books that the librarian has co-authored with colleagues.	212	71.9	31	10.5	24	8.1	15	5.1	13	4.4

Quantity of Publications	None		One		Two		Three		More than three	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Number of bibliographies that the librarian has compiled in the past three years.	183	62	73	24.7	28	9.5	9	3.1	2	0.7
Number of books that the librarian has reviewed in the past three years.	207	70.2	44	14.9	27	9.2	16	5.4	1	0.3
Number of researches that the librarian has completed in the past three years.	181	61.4	54	18.3	37	12.5	19	6.4	4	1.4
Number of on-going researches that the librarian has at present.	194	65.8	55	18.6	32	10.8	6	2.0	8	2.8

**Table 1:** reveals that the publications output of majority of the librarians in colleges of education was far below average; 103(34.99%) of the librarians have not published any article in professional journals, 45(15.3%) have published one article in a professional journal, 77(26.1%) have published more than three articles in professional journals in the past three years.

## **HYPOTHESIS TESTING**

### **HYPOTHESIS 1**

**Table 2:** Influence of Internet Connectivity on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	295	11.40	9.84	0.137	293	0.019	S
Internet Connectivity	295	2.03	1.217				

S= Significant at 0.05 level

**Table 2** shows the correlation table of Internet connectivity and research productivity of librarians with values ( $r=0.137$ ;  $P<0.05$ ). Since P is less than 0.05, it shows that

Internet connectivity influenced the research productivity of librarians to a significant extent.

**Table 3:** Influence of Collaboration with Colleagues on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	295	11.40	9.84	0.229	293	0.000	S
collaboration with colleagues	295	8.82	2.49				

S= Significant at 0.05 level

**Table 3** shows the correlation table of collaboration with colleagues and research productivity of librarians with values ( $r=0.229$ ;  $P<0.05$ ). Since P is less than 0.05, it shows that collaboration with colleagues significantly influenced the research productivity of librarians.

## 8. DISCUSSION OF FINDINGS

The findings of this research on publications output of librarians is of great concern. The findings revealed that the research productivity of majority of the librarians was far below average. This apathy to publication is worrisome since it implies that a good number of librarians would not be promoted as at when due.

Lack of promotion could have demoralising influence which could in consequence further aggravate the low publications output of the librarians. The findings of the research authenticated the findings of Powell (1997) and Ononhwakpor and Tiemo (2006).

It is evident from the findings of the research that internet connectivity had significant positive influence on the research productivity of librarians. The findings corroborated the investigative study carried out in South Western Nigeria by Okafor Imhonopi and Urim (2011). Researchers, including librarians in colleges of education who avail themselves of the publishing opportunities via the internet are most likely to be productive in terms of publications output than their colleagues who do not enjoy such facilities.

Moreover, the findings of the research established a positive correlation between research productivity of librarians in colleges of education in Nigeria and collaboration among colleagues. The findings of the research affirmed the report of the research conducted by Leach, Melicher, Oswald and Hermers (2000) who discovered that early – career co-authoring with a mentor (who is still research-active) significantly



increased the research productivity in later career research output for a faculty member and vice versa.

## **9. CONCLUSION AND RECOMMENDATIONS**

It is apposite to conclude from the result of the study that the research productivity of majority of the librarians in colleges of education Nigeria was far below average and that Internet connectivity and collaboration among colleagues had positive correlation on their research productivity.

The following recommendations are made in the light of this research.

- The authorities of colleges of education in Nigeria should give all necessary support to the librarians to improve their research productivity.
- The college authorities should do everything possible to connect the offices of the librarians to the Internet for anticipated maximum research productivity.
- It is strongly recommended for librarians including those in colleges of education in Nigeria to collaborate with research active peers or mentors to optimise their research productivity.

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