

# INFLUENCE OF DEMOGRAPHIC FACTORS ON THE PRODUCTIVITY OF LIBRARIANS IN COLLEGES OF EDUCATION IN NIGERIA

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## Influence of Environmental Factors on the Productivity of Librarians in Colleges of Education

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### ABSTRACT

*Provision of conducive work environment is fundamental to the productivity of all employees (including librarians in colleges of education) in any organisation. To achieve maximum productivity, management of all organisations, including college libraries must accord prime attention to the work environment of the employees. This is because, high productivity might become elusive to an organisation, even if employees are offered attractive salaries with little or no attention devoted to their working condition. The study, therefore, examined environmental factors as they influence the research productivity of librarians in colleges of education. The study adopted correlational research design. The population for the study comprises 63 colleges of education libraries (21 federal and 42 state owned) and the 356 librarians that are found in the libraries. Two instruments- Questionnaire on Job Motivation and Librarian Productivity ( $r = 0.97$ ) and in-depth Interview (IDI) for college librarians only were used for data collection. The data were analysed using simple descriptive statistics, Pearson product moment correlation and multiple regression. Findings from the study revealed that majority of the sampled librarians are not productive in terms of research productivity. Moreover, Internet connectivity, collaboration with colleagues and ownership of institution had significant influence on the productivity of librarians with values ( $r = 0.137$ ;  $p < 0.05$ ) and ( $r = 0.229$ ;  $p < 0.05$ ) ( $r = 0.249$ ;  $p < 0.05$ ) respectively. Since librarians are not productive in terms of research productivity, there is need to provide them with better working environment such as connecting their offices with Internet amongst others.*

**Keywords:** Environmental Factors, Productivity of Librarians, Colleges of Education in Nigeria.

**Library of Congress Classification Number:** Z669.7

### 1. INTRODUCTION

Environmental factors refer to all the physical, psychological, sociological and technological factors that are found in the librarian work place. Environmental factors can either impede or enhance the librarians' productivity. Regular or erratic power supply is part of the infrastructural environment. Librarians spend a significant portion of their time at the desks or in front of computer terminals and it are important for them to work in stress-free environment with possible maximum comfort. (Occupational outlook handbook, 2008). The demands of their assignment necessitate the provision of a comfortable, conducive and relaxed atmosphere if their productivity is to be enhanced and

maintained. The effect of conducive work environment could be enormous on the productivity of all categories of employees (including librarians in colleges of education in Nigeria).

Employers who pay attention to all the details that affect the welfare of their workers including environmental details and not just financial compensation alone are more likely to retain their best people, save cost and improve the productivity of their workers (Kampert, 2008). Ngulube (2000) supports the above assertion in his study on the national archives of Zimbabwe. He discovered that the national archives of Zimbabwe was not able to retain its professionally trained staff due to poor working conditions and lack of job satisfaction. Clean environment is part of the incentive packages that could be given to workers (Sakir and Fajonyomi, 2007).

Ndagana (2007) affirmed the indispensability of a fine ecology to the output of the worker. He believes that the work place is one of the major foci of personal evaluation. A worker that has poor personal evaluation of himself/ herself as a result of the working environment is likely to have a dampened morale and in essence contribute less to the total organisational output. In other words, poor environmental conditions and poor personal evaluation due to unsatisfactory environmental conditions might result in diminishing returns to productivity (output).

Management should give adequate attention to the minutest details that could directly or indirectly affect the productivity of the workforce. The office or the environment where the librarian works is as important as the work that he does. If productivity of the librarian is to be guaranteed, management should ensure that he works in a conducive environment. Environment which encourages privacy and which is replete with information materials that could avail the librarian with the opportunity of learning and developing himself could enhance his productivity.

In other words, productivity, profitability and retention go hand-in-hand. Apart from financial remuneration, a stimulating and rewarding work environment enhances productivity, increases retention and creates more dedicated workers (Top employee benefits, 2010). Conducive working environment enhances employee high productivity (Paul, 2002). Brill (1990), in a survey conducted suggested that improvement in the physical design of office buildings may result in a 5-10 percent increase in employee's productivity. Conducive work environment ensures the well-being of employees which invariably enables them exert themselves to their roles with all vigour that might translate to higher productivity (Akinyele, 2007). The quality of comfort derivable from work environment determines the level of satisfaction and productivity of workers (Brenner, 2004).

Amir and Sahibzada (2010) in their study of private sectors companies of Pakistan discovered that behavioural components of office environment have the greatest impact on the performance level of office employees and the levels of interaction, in terms of: social, work, position relative to colleagues, position relative to equipment and quality of refreshments- have strong positive influence on the output of the employees. In his study of work environment and workers productivity in Lagos, Taiwo (2009) findings revealed that the work environment is poor (as indicated by 42.63% respondents).

Majority of the respondents (70.49%) were of the opinion that high pay, conducive and better work environment could lead to improvement in their productivity.

The work environment, according to Opperman (2002) is a composite of three major sub-environments viz: the technical, the human and the organisational environment. Technical environment refers to tools, equipment, technological infrastructure and other physical or technical elements. This environment creates elements that enable employees perform their respective responsibilities and activities. The human environment refers to peers, others with whom employee relates, team and work groups, interactional issues, the leadership and management. Human environment is designed in such a manner that the opportunity to share knowledge and exchange ideas could be enhanced. This is a basis to attain maximum productivity. Organisational environment include systems, procedures, practices, values and philosophies. Management has control over organisational environment.

Locke (1976) reported that employees prefer physical surroundings that are largely comfortable and not dangerous or hazardous. With regards to relationship at work, most employees prefer to work in an environment with warm and cordial social interaction. Ngulube (2000) agrees with the above view. Hence, working with friendly and supportive co-workers, and working in a friendly and relaxed environment could enhance job satisfaction and productivity of the employees. Irons (2006), asserted that there is a link between a comfortable work environment and the productivity of an employee.

Kaya (1995) opined that workers usually compare their conditions with the conditions of the society, under the variable of social condition and if the social conditions are worse than the individual working conditions, then this will result in satisfaction of the workers and vice-versa. Demirel (1989) in a survey carried out among librarians working at 28 university libraries in Turkey, identified the role of the physical, social, economic and psychological environment on the contentment, satisfaction and productivity of librarians. Nzotta (1984), noted that librarians in Nigeria were not satisfied with their working environments. He observed that most libraries in Nigeria were short of space –office, storage, shelving, for example - and asserted that most libraries were housed in temporary, make-shift accommodations.

It has been observed that nature (heredity) and nurture (environment) are two major determining factors of man's physical and social development. It should be added that a good, conducive and enabling physical, social, academic, mental, economic and cultural environment could play a crucial role on the productivity of librarians. The researcher opines that a conducive working environment would under normal circumstances positively influence worker's job satisfaction, internal happiness and attendant productivity. This is because workers normally evaluate themselves in terms of the beauty of the environment in which they work. If workers have a positive disposition of their working environment their disposition to work and the attendant productivity are most likely to be positively high and vice-versa. The study tested the influence of environment on the research productivity of librarians. Moreover, conducive work environment under normal circumstances has the tendency of

boosting the job morale and the research productivity of the librarian and vice versa. The study tested this.

Productivity of librarians including academic librarians is service oriented. The services of academic librarians could be grouped into two major groups namely –intangible services (which include: frequency at departmental meeting; contribution to the organisational growth; innovation introduced and commitment to duty) and tangible services ( which include: academic qualifications; on going researches; numbers of journals articles published; number of papers published in conference proceedings, number of books published; chapter in books published; number of books reviewed and number of bibliographies compiled. Productivity of the librarians in colleges of education in Nigeria was measured in this paper via tangible services alone. The position of the researchers to measure the productivity of the academic librarians via tangible services alone is in line with the submission of Idachaba (1995), Skirbekk(2003) and Fennewald(2008) amongst other reputable scholars.

There appears to be a dearth of information in the literature on the research output of individual librarians in relation to the environment in which they work. Very few individuals have worked on job satisfaction and research output of librarians in Nigeria universities. Moreover, the university environment where very few studies have been done is quite different from college environment. There could be some factors in the college environment which are not present in the university environment that could influence the research productivity of librarians and vice versa. In addition, librarians who work in federal colleges of education enjoy better condition of service in terms of funding than their colleagues in state owned colleges. Differences in condition of service could also influence the research productivity of the librarians. The study is expected to fill such identified gaps in the literature that could specifically influence the productivity of librarians in colleges of education in Nigeria. From the preliminary investigation carried out by the researchers, it was found that the librarians appeared to be dissatisfied with their job, unproductive and would be willing to quit their present employment for better work environment. Lack of their productivity could have emanated from:lack of Internet connectivity, erratic power supply, unconducive office environment, lack of collaboration with colleagues, lack of publishing skills, and work over load etcetera.

The study, therefore, investigated the level of librarian's productivity and verified the extent to which environmental factors affected the research productivity of librarian in colleges of education in Nigeria.

### **1.1 Objectives of the Study**

The main objective of the study is to investigate the effect of environmental factors on the productivity of librarians in college of education in Nigeria. The specific objectives are to:

1. Determine the research productivity of librarians in colleges of education in Nigeria;
2. Investigate if environmental factors (such as power supply, lighting, Internet connectivity, collaboration with academic colleagues and other physical infrastructure)influence the research productivity of librarians in colleges of education in Nigeria;

### 1.2 Research Questions

To achieve the foregoing objectives, the following research questions are asked:

1. How productive are librarians in colleges of education in Nigeria in terms of research productivity?
2. To what extent will conducive office environment (such as physical illumination, office space and furniture) influence the research productivity of librarians in colleges of education in Nigeria.

### Hypothesis

The following null hypotheses were tested at 0.05 level of significance

H<sub>01</sub>: Power supply will not significantly influence the research productivity of librarians in colleges of education in Nigeria.

H<sub>02</sub>: Internet connectivity will not significantly influence the research productivity of librarians in colleges of education in Nigeria.

H<sub>03</sub>: Collaboration with colleagues will not significantly influence the research productivity of librarians in colleges of education in Nigeria.

H<sub>04</sub>: Ownership of the institution will not significantly influence the research Productivity of librarians in colleges of education in Nigeria.

### 1.3 Scope of Study

The study covers all the college of education in Nigeria and all librarians that are found in these institutions. It as well covers the extent to which environmental factors (such as: office environment, Internet connectivity, power supply collaboration with colleagues and ownership of institution) affect the productivity of librarians in colleges of education in Nigeria.

## 2. RESEARCH METHODOLOGY

The study adopted correlational research design. Correlational research design is used to relate two or more variables (Co relational research designs, 2010).

Thus, this research design was used for the following reasons

1. It is a research approach which analyses the relationship between data, between variables and some other results in such a way that the underlying pattern of relationships becomes clear.
2. It utilises the correlation technique of analysis, but it goes far beyond and includes, many other important elements.
3. It approaches the problem of cause and effect in terms of many variables and reflects the variation of many factors at once rather than in terms of a single variable at a time.
4. It is an improvement over experimental method (Sidhu, 2006).

The population for the study comprises 63 colleges of education libraries in Nigeria- 21 Federal (12 regular, 8 technical and 1 special) and 42 State and the 356 librarians that are working in the libraries. For the study, two instruments were used to collect data. The two instruments are self-constructed. Instrument 1 tagged: Questionnaire on Job Motivation and Librarians' Productivity (QJMLP), which was administered to librarians in all the federal and state colleges of education in Nigeria. Instrument 2 tagged in-depth Interview (IDI) for College Librarians only

The instruments were subjected to face and content validity. Cronbac alpha reliability analysis formula was used to establish the reliability coefficient of the instruments. The reliability coefficient of the instruments (1 and 2) was 0.97 and 0.99 respectively. Pearson product moment correlation and multiple regression analysis were used to determine the composite (joint) and relative effect of independent variables on the dependent variable in the study.

### 3. RESULT AND DISCUSSION OF FINDINGS

This section presents the results obtained from the study and the discussions on the findings. The results of the research questions raised are presented using descriptive statistics of frequency counts, percentages and measure of dispersion (mean and standard deviation). For the formulated hypotheses which were tested at 0.05 level of significance the results are presented using Pearson correlation formula, regression analysis and inferential statistics. In all, 356 copies of the questionnaire instrument were administered in all the 63 colleges of education (federal and state) that are found in the six geo-political zones in Nigeria. In all, 295 copies of the questionnaire instrument were completed and retrieved making the response rate to be 82.87%. Ten section of in-depth interview (IDI) were held with the college librarians. The results of the IDI were used to complement the results of the questionnaire instrument.

#### 3.1 Answers to Research Questions

This section provides answers to the two research questions in the study.

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

**Table1: Productivity of Librarians in Colleges of Education in Terms of research productivity**

Quantity of Publications	None		One		Two		Three		More than three	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
How many articles have you published in professional journals in the past three years(2010-2012)?	103	34.9	45	15.3	77	26.1	59	20.0	11	3.7
How many articles have you published in professional journals since you began your career?	102	34.6	27	9.2	32	10.8	26	8.8	108	36.6
How many professional conferences/seminars/workshops have you presented papers in the past 3 years (2010-2012)?	105	35.6	73	24.7	47	15.9	54	18.3	16	5.4
How many chapters in books have you contributed in the past three years(2010-2012)?	157	53.2	53	18.0	43	14.6	36	12.2	6	2.0
How many professional/academic journals have you co-authored with colleagues?	209	70.8	33	11.2	26	8.8	13	4.4	14	4.8
How many professional/academic books have you co-authored with colleagues?	212	71.9	31	10.5	24	8.1	15	5.1	13	4.4
How many bibliographies have you compiled in the past three years(2010-2012)?	183	62	73	24.7	28	9.5	9	3.1	2	0.7
How many books have you reviewed in the past three years (2010-2012)?	207	70.2	44	14.9	27	9.2	16	5.4	1	0.3
How many researches have you completed in the past three years (2010-2012)?	181	61.4	54	18.3	37	12.5	19	6.4	4	1.4
How many on-going researches do you have at present?	194	65.8	55	18.6	32	10.8	6	2.0	8	2.8

Table 1 shows that 105(35.6%) of the sampled librarians have not presented any paper in professional conferences/seminars/workshops in the past three years (2010-2012). Another 73(24.7%) revealed that they have presented paper once in professional conferences/seminars/workshops, 47(15.9%) revealed that they have presented papers twice in professional conferences/seminars/workshops, 54(18.3%) revealed that they have presented paper thrice and 16(5.4%) have presented papers more than three times in professional conferences/seminars/workshops in the past three years.(2010-2012).

**Research Question 2:** To what extent will conducive office environment (such as physical illumination, office space and furniture) influence the research productivity of librarians in colleges of education in Nigeria?

**Table 2: Influence of Conducive Environment on the Research Productivity of Librarians**

	N	Mean	Standard Deviation	Pearson coefficient (r)	Df	P <sub>value</sub>	Remark
Research productivity	295	11.40	9.84	0.197	293	0.001	S
Conducive Environment	295	20.91	7.21				

S= Significant at 0.05 level

Table 2 shows the correlation of conducive environment and research productivity of librarians with values ( $r=0.197$ ;  $P<0.05$ ). Since P is less than 0.05, it shows that conducive environment (such as physical illumination, office space and furniture) influences to a significant extent the research productivity of librarians.

#### 4. HYPOTHESES TESTING

Four null hypotheses were tested at 0.05 level of significance. They are described below

**H<sub>01</sub>:** power supply will not significantly influence the research productivity of librarians in colleges of education in Nigeria

**Table 3: Influence of Power Supply on the Research Productivity of Librarians**

	N	Mean	Standard Deviation	Pearson coefficient (r)	Df	P <sub>value</sub>	Remark
Productivity	295	11.40	9.84	0.089	293	0.128	NS
Power Supply	295	2.18	1.07				

NS= Not Significant at 0.05 level

Table 3 shows the correlation table of power supply and research productivity of librarians with values ( $r=0.089$ ;  $P>0.05$ ). Since P is greater than 0.05, it follows that there is no significant influence of power supply on research productivity of librarians.

**H<sub>02</sub>:** Internet connectivity will not significantly influence the research productivity of librarians in colleges of education in Nigeria,

**Table 4: Influence of Internet Connectivity on Research Productivity of Librarians**

	N	Mean	Standard Deviation	Pearson coefficient (r)	Df	P <sub>value</sub>	Remark
Research 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 4 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 influences the research productivity of librarians to a significant extent.

H<sub>03</sub>: Collaboration with colleagues will not significantly influence the research productivity of librarians in colleges of education in Nigeria.

**Table 5: Influence of Collaboration with Colleagues on the Research Productivity of Librarians**

	N	Mean	Standard Deviation	Pearson coefficient (r)	Df	P <sub>value</sub>	Remark
Research 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

Table5 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 had significant influence on research productivity of librarians.

H<sub>04</sub>: Ownership of institution will not significantly influence the research productivity of librarians in colleges of education in Nigeria

**Table 6: Influence of Ownership of institution on the Research Productivity of Librarians**

	N	Mean	Standard Deviation	Pearson coefficient (r)	Df	P <sub>value</sub>	Remark
Research Productivity	295	11.40	9.84	0.047	293	0.426	NS
Ownership of institution	292	1.55	0.498				

NS = Not Significant at 0.05 level

Table 6 shows the correlation table of ownership of institution and research productivity of librarians with values ( $r=0.249$ ;  $P<0.05$ ). Since P is less than 0.05, it shows that ownership of institution influenced the research productivity of librarians to a significant extent.

#### 4.1 Research Productivity of Librarians in Colleges Of Education In Nigeria

The results of the research show that majority of the librarians in colleges of education in Nigeria are not productive in terms of research productivity. Whatever might have been responsible for low research productivity of the librarians, there is the need to make effort to increase the research productivity of the librarians in the colleges of education in Nigeria. This is because the research productivity of the librarians is their own contribution to the nation's Gross Domestic Product (GDP). If the research productivity of the academic librarians are to be counted in calculation of the Gross Domestic Product (GDP) in Nigeria, the low productivity of librarians as workers in the information industry would definitely have adverse effect on the GDP. To optimise both Gross National Product (GNP) and Gross Domestic Product (GDP) in Nigeria, the need to improve the research productivity of librarians in colleges of education is mandatory. The contribution of the college librarians in terms of research productivity to the development of the country is a significant quota which could not be whisked away in view of overall development of Nigeria. This is because the development and total transformation of any society is hinged on the quantitative and qualitative exploitation of both human and material resources. This corroborates the views of Yusufu (2000) and Akinyele (2007) when they argued that high productivity in any society is fundamental for the upliftment of the welfare of the citizens and the reduction if not total eradication of poverty.

Moreover, if academic librarians are to justify the essence of their continuous employability and establishment of libraries in the face of the ever competing global information market, they should do everything possible to improve and optimise their profitability and productivity. Improving their research productivity is to their own advantage and to the overall benefits of their respective establishments. Moreover, accountability and stewardship are expected of librarians. This agrees with Andrew's view in 2007 when he argued that the positions of librarians are positions of trust, stewardship and accountability. As stewards they are expected to be accountable to their employers.

#### 4.2 Influence of Conducive Office Environment on the Research Productivity of Librarians

The findings of the research reveal that conducive office environment had significant influence on the research productivity of librarians. The findings corroborate the findings of Kampert (2008) who averred that employers who pay attention to all the details that affect the welfare of their workers including the environmental details are most likely to retain their best people, save cost and optimise research productivity. The findings also affirm the study of Ngulube(2000), Sakir and Fajonyomi (2007) and Ndagana (2007) who identified the indispensability of a clean environment and fine ecology to the output of the worker. These researchers averred that workers normally evaluate themselves in terms of the environment in which they work. Since conducive environment had significant influence on the research productivity of librarians, library management at the federal and state colleges of education in Nigeria should do everything possible to provide befitting and conducive office environment to the librarians.

Financial remuneration is a good motivator but in the words of Kanpert (2008) conducive office environment is more than financial compensation. In other words, apart from salary and other financial remunerations, the library management should provide the librarians with the following amongst others: spacious offices; good chairs and tables; chairs for visitors; rugged offices with Air Conditions (AC); offices laden with current information materials; refrigerators; and kettles for warm water. If such office environments are provided, the librarians would be proud of themselves, their work and would be fast to invite their friends to their places of work. Such satisfaction and inner contentment could give rise to a feeling of self-accomplishment. Such feeling of self-accomplishment has the tendency to stir librarians to greater commitment, loyalty, dedication and productivity. Such committed librarians are most likely to remain on their jobs even in the face of better alternatives.

#### **4.3 Influence of Power Supply on the Research Productivity of Librarians**

The findings of the research show that power supply did not have significant influence on librarians' research productivity with weighted mean  $\bar{X}$  of 2.18 and standard deviation (S) of 1.07 respectively (with values  $r = 0.089$ ,  $P > 0.05$ ). The findings of the research contrasted popular belief on the importance of power supply.

#### **4.4 Influence of Internet Connectivity on the Research Productivity of Librarians**

The findings of the research show that Internet Connectivity had significant influence on librarians' research productivity with weighted mean  $\bar{X}$  of 2.03 and standard deviation (S) of 1.217 respectively (with values  $r = 0.137$ ;  $P < 0.05$ ). The findings of the research corroborated Shibanda's reports. Shibanda (2006), while shedding light on the activities of the Programme for the Enhancement of Research Information (PERI) in Kenya, reported that there is a positive correlation between Internet connectivity and access to e-journals in universities and research institutions. The programme was designed to maximise access to online information and to increase the research output of the researchers. He added further that the Kenya librarian and information services consortium (which comprise universities and research institutions) was established to fully maximise the benefits that are derivable from the utilisation of the e-journal. The consortium subscribes to over 22 online resources and databases globally. The report given by Shibanda is a clear testimony to the enormous publishing opportunities that are derivable from Internet connectivity. Researchers, including librarians in colleges of education in Nigeria who avail themselves of the publishing opportunities via the Internet are most likely to be productive in terms of research productivity. Librarians who can navigate the Internet very well could get a lot of information materials which include: current research publications, conference proceedings, workshop papers and e-journals.

The librarian could download such information materials; understudy them; adapt and adopt them; and probably embark on same or similar researches from another point of view. In the interview conducted, a good number of college librarians affirm that the offices of their librarians are connected to the Internet. The findings of the questionnaire (instrument 1) corroborate that of in-depth interview (IDI) (instrument 2). This is a welcome development. It should be continued with more vigour in all the

college libraries across Nigeria with utmost quality. This could go a long way to ensure that librarians in colleges of education publish (both qualitatively and quantitatively) in a stress-free environment.

#### **4.5 Influence of Collaboration with Colleagues on the Research Productivity of Librarians**

The findings of the research indicated that collaboration with colleagues had significant influence on the research productivity of librarians with weighted mean ( $\bar{X}$ ) of 8.82 and standard deviation (S) of 2.49 respectively (with values  $r = 0.229$ ;  $P < 0.05$ ). The findings of the research corroborate 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. Moreover, junior faculty who establishes co-authoring arrangements with peer (rather than sole) were more productive in terms of research productivity

#### **4.6 Influence of Ownership of Institution on the Research Productivity of Librarians**

The findings of the research showed that ownership of institution had significant influence on the research productivity of librarians with the weighted mean ( $\bar{X}$ ) of 1.55 and standard deviation (s) of 0.498 (with values  $r = 0.047$ ;  $P < 0.05$ ). The findings of the research agree with the findings of Ndagana. Ndagana (2007), identified the indispensability of a fine ecology to the output of the worker. He added that worker that has poor personal evaluation of himself as a result of working environment is likely to have dampened morale and in essence contribute less to the total organisational output. There are pronounced marks of differences between federal and state workers in Nigeria (including librarians in colleges of education). Federal employees (including librarians in colleges of education) in Nigeria are usually paid by the federal government while state employees (including librarians in colleges of education) are usually paid by their respective state governments. With the monetisation programme of the federal government, librarians in federal colleges of education in Nigeria are paid consolidated salary scale (CONTISS) with all the full packages like housing and transport allowances. The state governments also pay consolidated salary scale (CONTISS) to the librarians in colleges of education in their respective states. While the CONTISS that is paid to the librarians in federal colleges are full, the ones that librarians in state colleges receive are usually amputated. Different state governments adjust the salary scale to suit their own ends from one state to another. In some states where salary scale is not adjusted, librarians are made to pay back in form of heavy taxation. At the end of the month (year) there are discrepancies in the take home of the federal and state workers, such discrepancies are tilted in favour of the former group. Since those librarians go to the same market and interact among themselves, in the process interaction, a feeling of job dissatisfaction is likely to set it. This may result in mass job turn-over of state workers. Moreover from the IDI that were held with the college librarians, it was shown that federal colleges of education in Nigeria enjoyed better funding which invariably could influence the research grant and the eventual research productivity of the librarians in federal colleges compared with those that are in state owned

### **5 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### 5.1 Summary of major findings

The major findings of the study are as follows

1. Majority of the sampled librarians are not productive in terms of research productivity
2. Conducive work environment had significant influence on librarians' research productivity.
3. Power supply had no significant influence on research productivity of the librarians
4. Internet connectivity had significant influence on research productivity of the librarians
5. Co-authoring with colleagues had significant influence on research productivity of the librarians
6. Ownership of institution (in terms of federal and state) had significant influence on research productivity of the librarians.

### 5.2 Conclusion

From the findings of the study, it is clear that majority of the librarians in colleges of education in Nigeria were less productive in terms of research productivity, 103 (34.9%) have not published in professional journals in the past three years (2010-2012), 102 (34.6%) have not published since they began their career while 209 (70.8%) have never co-authored with colleagues. Two, power supply did not have any significant influence on the research productivity of librarians with values ( $r = 0.089$ ;  $p > 0.05$ ). Three, internet connectivity significantly influenced the research productivity of librarians with values ( $r = 0.137$ ;  $p < 0.05$ ). Four, collaboration with colleagues significantly influence the research productivity of librarians. Finally, ownership of institution had significant influence on the research productivity of librarians in colleges of education in Nigeria with value ( $r = 0.249$ ;  $p < 0.05$ )

### 5.3 Recommendations

1. College authorities in colleges of education in Nigeria should give all necessary encouragement to the librarians to improve their research productivity. The findings of the research show that majority of the librarians are less productive in terms of research productivity. The college authorities should therefore do everything possible to optimise the research productivity of the librarians
2. The college authorities should do everything possible to connect the offices of the librarians to the Internet for anticipated maximum research productivity. Findings of the study revealed that Internet connectivity had significant influence on the research productivity of librarians in colleges of education in Nigeria. It is strongly recommended in the light of the findings of the research, therefore, that the offices of the librarians should be connected to the Internet.
3. Young librarians should partner and collaborate with experience but research productive colleagues so as to benefit from the gamut of experience of the latter in terms of research productivity of quality research findings. Findings of the study showed that junior librarians who partner with senior, experienced and research-active librarians are more productive than those who partner with senior but research-passive librarians.
4. College authorities in state colleges of education should understudy the working conditions that are obtainable in federal colleges, make the same or similar conditions available in their respective institutions so as to get the same or similar result of improved research productivity. This is only possible if productive librarians are recruited and retained by management. Findings of the study

revealed a concentration of librarians in the few available colleges of education (21) compared with many state colleges of education (41). Librarians in federal colleges of education enjoy better working conditions than their colleagues in state colleges. No wonder, there are 131(44.4%) librarian in 21 federal colleges of education compared the very with 161(54.6%) librarians in 41 state colleges.

## **6. CONTRIBUTION TO KNOWLEDGE**

The findings of the research show that majority of the sampled librarians in the colleges of education in Nigeria are not productive in terms of research productivity. It becomes necessary for the college authorities to device policies that could optimise the research productivity of the librarians. If the college authorities would not be maintaining the librarians at a loss, they must do everything possible to enhance their employability, profitability and productivity. The college authorities could optimise the research productivity of the librarians through: any of (or a combination) the following: giving opportunities for staff development programmes; providing suitable working tools; providing suitable working environment; providing research grants; and giving any other incentives that are geared towards optimising the productivity of the librarians. In the age of global economic recession coupled with stiff competition in the information industry, the librarians in colleges of education in Nigeria should do everything possible to make themselves relevant by being highly productive. In addition, with the present emphasis of the government on productivity at the national and international levels, no librarians would take the issue of research productivity very lightly. No librarians would want to be laid off from their job as a result of redundancy and low research productivity. The study, therefore, is an eye opener to the librarians and the college authorities. Both parties should spare no effort to optimise the research productivity of the librarians. The college authorities and the librarians themselves would benefit maximally from the services of highly productive librarians.

In addition, the study revealed a high concentration of librarians in federal colleges than state. This might not be unconnected to better working condition in the former institution. It is imperative for authorities of state colleges to under study the conditions of service in the federal colleges, make the same or similar available so as enjoy the services of the librarians in form of high research productivity. Moreover, junior librarian who desire enhanced research productivity should co- author experienced but research – active mentors in academic papers. Finally the study revealed that power supply did not have any significant effect on librarian’s research productivity. Daylight radiation and other alternative sources of power like (investors, generators etcetera). If judiciously utilized by librarians could optimize their research productivity.

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