

Influence of Job Motivation, Demographic And Environmental Factors On The Productivity Of Librarians In Colleges Of Education In Nigeria

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Abstract

Attainment of high productivity is of primary concern to all employees and management of most organisations, including colleges of education libraries. To achieve maximum productivity, management experts advocate increased staff welfare among several measures to ensure job commitment and satisfaction among the different categories of employee, including libraries. This study, examined job motivation, demographic and environmental factors influencing research productivity of librarians in colleges of education in Nigeria. Total enumeration technique was used to cover all the 356 librarians in the 63 public colleges of education that existed as at 2011 in Nigeria. Private colleges were excluded as they do not have common labour policy. The following instruments were used: Librarians' Productivity Scale ($r=0.71$); Job Motivation of Librarians Scale ($r=0.87$); Librarians' Job Training Programme Scale ($r=0.85$); Librarians' Environmental Scale ($r=0.75$). These were complemented with 10 sessions of In-depth Interview (IDI) from purposively selected chief librarians. Three research questions were answered and 11 hypotheses tested at 0.05 level of significance. Data were analysed using percentages, Pearson Product Moment correlation, multiple regression and qualitative data were subjected for content analysis. Librarians' research productivity correlated with each of: staff development ($r=0.37$), job motivation ($r=0.28$), educational qualification ($r=0.25$), work experience ($r=0.23$), collaboration with colleagues ($r=0.23$), conducive environment ($r=0.20$), age ($r=0.17$), job status ($r=0.15$), and internet connectivity ($r=0.14$). Job motivation and demographic and environmental

factors had significant composite influence on librarians' research productivity ($F_{(9,228)}=7.23$, $p<0.05$; $R=0.47$) and jointly contributed 19.1% to the variance of the independent variable. IDI results revealed that there is problem of poor power supply as well as poor internet connectivity, which makes it difficult for the librarians to access electronic information for the enhancement of their research productivity. There is the need to ensure better power supply as well as Internet accessibility in public colleges of education in Nigeria

Key words: Librarians' productivity, Job motivation, Demographic factors, Environmental factors, Colleges of Education in Nigeria.

Introduction

In most organisations where employees are valued as assets, maximum productivity is of primary concern to management, including colleges of education libraries. Thus, the need to accord high premium to the welfare of the employees has been the major preoccupation of management in any organisation – non-profit, not-for-profit and profit-making. This is because it is possible for an organisation to have the most efficient technological and infrastructural facilities compared with similar organisations and still suffer low productivity due to the disposition of the workforce. An organisation's liveliness, whether public or private, comes from the motivation of its employees (Lewis, Goodman and Fandt 1995). It is, therefore, imperative for management in any organisation, including colleges of education libraries to tactfully study the work environment; identify what motivate their

employees; accord high priority to such; so as to enjoy the contributions of the latter in form of high productivity (Paul, 2002, Owusu-Acheaw, 2007, Amir and Sahihzada, 2010). High productivity would enhance cost benefits (profitability and efficiency) in terms of inputs – outputs ratios and stem the tide of human and material wastage in any organisation.

There is no justification for establishing and maintaining organisation at a loss due to poor management and low productivity of the work force. In the era of global economic recession, managers of all organisations are doing their best to optimise the productivity of both human and material resources at their disposal. There is zero tolerance for economic wastage, idleness and redundancy. This is because managers are being constantly called upon to give account of their stewardship. In the Information Age characterised by stiff competition and survival of the fittest among firms, issues that border on the productivity of the workforce are of major concern to managers of all organisations including colleges of education libraries. All organisations are now working towards joining forces with High Performing Organisations (HPO). There is no organisation that would be willing to be left behind as a Low Performing Organisation (LPO) in the age of global stiff economic competition. Many organisations are now undergoing changes as a result of Business Process Re-engineering (BPR) (Coping with change, 1997, Henczel, 2002).

It should be pointed out, however, that productivity cannot be enforced on workers. It should emanate naturally from their happy disposition. For instance, it is possible for a librarian to be despondent and still be reporting for duty everyday without being productive. In other words, some favourable conditions should be provided if the productivity of the librarian is to be enhanced. Under normal circumstances, workers productivity would increase if such workers are made to work in favourable environment with favourable condition of service. College authorities should holistically examine issues that border on variables such as: librarians welfare; commitment to duty; performance; retention; profitability and productivity.

Apart from giving attractive salaries and other incentive packages to the librarians, the college authorities should still ensure that the welfare package of the librarian is fully provided for. Similarly, all the minute details in the work environment like the physical facilities in the office of the librarians should be provided for. The office of the librarian should have some modicum of comfort such as air-condition, comfortable chair and table, seats for visitors, etcetera. Moreover, working tools like personal computer (that is connected to the internet),

print and non print information materials etcetera should be provided in the office of the librarians. With the provision of adequate working tools coupled with conducive office environment, the productivity of the librarians would likely receive a positive boost. It has been argued that workers normally evaluate themselves and their worth vis-à-vis the work environment in which they are found, (Kaya, 1995, Ndagana, 2007 Kampert, 2008).

College authorities should therefore provide librarians with conducive office environment that is tailored towards optimising the productivity of the latter; other favourable conditions of services like continuous professional development should be liberally made available for the librarians. Staff development programmes would in the short and long run in all probability ensure the professional advancement of the librarians and eventual high productivity. Continuous professional development would not only enhance the productivity of librarians but would definitely boost their job morale and eventual retention on the job. Therefore, college authorities should be both inward and outward looking in ensuring that the librarians get intra and inter-organisational satisfaction in their chosen career. That is, when librarians compare their conditions of service with other workers within the same college and with other workers in comparable organisations a feeling of heightened job morale should ensue and vice-versa (Kaya, 1995 Adam's Equity theory 2010).

Apart from job motivation (which include: salaries, work itself, in-service training, job security, compensation, encouragement etcetera), and environmental factors (which include: conducive office environment, adequate working tools, power supply, internet connectivity, office infrastructural facilities etcetera), demographic factors (which include age, gender, educational qualifications, job status etcetera.) could equally exert tremendous influence on the productivity of the librarians in colleges of education in Nigeria. For instance, a senior librarian who is saddled with some unnecessary administrative responsibilities due to his position might not be as productive as a newly employed librarian who is not saddled with any administrative obligations. Moreover, a young librarian could be more productive than an old librarian especially when it has to do with tasks that involve learning of new skills. The old librarian might be willing to learn new skills but age might constitute an impediment. Other demographic factors like educational qualifications and gender could as well have significant influence on the productivity of librarians.

Productivity of librarians in colleges of education in Nigeria is service-oriented. The services are

classified into two major sub-groups namely- intangible (which include: frequency at departmental meeting, contributions to the departmental growth, innovation introduced and commitment to duty) and tangible services (which include: academic qualifications, ongoing researches, number of journal articles published, number of papers published in conference proceedings, number of books published, chapters in books published, number of books reviewed and number of bibliographies compiled). For the study, the productivity of the librarians in colleges of education in Nigeria was measured via the tangible services alone. There is enough information in the literature on the organisational productivity of the librarians especially on service delivery. There is, however, a dearth of information in the literature on the research output of individual librarian.

Very few individuals have worked on job satisfaction and research output of librarians in Nigerian 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 could influence the research productivity of librarians which are not available in university environment. The study filled such identified gaps in the literature that could specifically influence the research productivity of librarians in colleges of education in Nigeria. For instance, the management policy as regards: the disbursement of funds for execution of researches, participation in staff development programme, work overload, office space etcetera, could influence the research productivity of librarians in colleges of education in Nigeria. The study, therefore, investigated influence of job motivation, demographic and environmental factors on the research productivity of librarians in colleges of education in Nigeria.

Statement Of The Problem

Librarians in colleges of education in Nigeria are academic staff who amongst other duties are expected to conduct research, disseminate their findings as well as carry out administrative duties. One of the major prerequisites for promoting the librarians in colleges of education in Nigeria is research productivity (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). Similarly, academic librarians publish to meet the promotion and tenure demands of their institution to gain faculty status (Buttler, 1991 and Mularski and Bradigan, 1991). Despite the benefits of publications to librarians some of them do

not conduct enough research and publication. (Powell, 1997; Ononhwakpor and Tiemo, 2006).

The low research productivity of some of these librarians could have been due to any or a group of the following highlighted factors. One, low research productivity could have been due to lack of research fund, poor work condition and non-availability of resources for research. (Blick, 1984, Hart, 1999, Sedikadiwa, 2005). Two, lack of attractive job motivation that dampened the morale of the librarians (Mabawonku, 2005). Three, the difficulty of writing acceptable papers that might go through some stringent peer review procedure (Ononhwakpor and Tiemo, 2006). Four, lack of collaboration with research-active mentors or peers. Five, poor technological facilities in the work environment in form of disabled internet facilities, epileptic public power supply. Six, unconducive office environment and nature of librarians job that gave little or no allowance for research publication (Swisher, 1986 and Moah, 2007). Seven, lack of publishing skills due to inadequate formal training and other staff development programmes (Ocahi & Nedosa 1998, Powell, 2002, Avemariautulu, 2005, Moahi, 2007). Eight, lack of work or research experience. Finally, position of responsibility could have impacted negatively on research productivity of some of the librarians.

The study, therefore, examined job motivation, demographic and environmental factors as influencing factors on the research productivity of librarians in colleges of education in Nigeria.

Objectives of the Study

The main objective of the study is to investigate the influence of job motivation, demographic and environmental factors on the research productivity of librarians in colleges 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 job motivation will influence the research productivity of librarians in colleges of education in Nigeria;
3. ascertain if staff development influences the research productivity of the librarians;
4. determine if demographic factors (such as age, academic qualifications, gender, years of work experience and job status) influence the research productivity of the librarians and;

5. 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

experience, qualification, job status) environmental factors (physical and social) training programmes and collaboration with colleagues will not have significant composite influence on librarians' research productivity.

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. What is the influence of job motivation on the research productivity of librarians in colleges of education in Nigeria?
3. To what extent will age influence the research productivity of librarians in colleges of education in Nigeria?
4. 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?

Hypotheses

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

- H₀₁: Job status will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- H₀₂: Gender will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- H₀₃: Internet connectivity will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- H₀₄: Participation in staff development will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- H₀₅: Educational qualifications will not significantly influence the research productivity of librarians in colleges of education in Nigeria.
- H₀₆: Librarian related variables (job motivation, age, years of work

Scope of the Study

The study covers all the 356 librarians in the 63 public colleges of education that existed as at 2011 in Nigeria. Private colleges were excluded since they do not have uniform labour policy. Moreover, many of the private colleges of education are new and might lack the necessary information infrastructure that the study requires. The study as well covers the extent to which demographic variables such as sex, age, job status and years of work experience influence the research productivity of librarians in colleges of education in Nigeria. It also covers the extent to which job motivation (such as: salaries, work itself, freedom, compensation etcetera), staff development programmes (such as: in-service training, participation in seminars/workshops/conferences/orientation etc), and environmental factors (such as: office environment, Internet connectivity, power supply, working tools) influence the research productivity of librarians in colleges of education in Nigeria

Research Methodology

The study adopted correlation research design. A statistical analysis of covariant data which is used to determine a pre-existing relationship where the researcher makes no attempt to manipulate an independent variable is referred to as correlation research. This research technique is used to relate two or more variables (Correlation research design, 2010).

This research design is used to measure the strength of association or the degree to which variation in one factor or set of factors is associated with variation in others. For instance, the extent of association among the independent variables (job motivation, demographic and environmental factors) and dependent variable (research productivity) and the degree to which an independent variable (or a group of independent variables) influence the research productivity of librarians in colleges of education in Nigeria could be ascertained.

In the study, census was used to cover all the 356 librarians in the 63 public colleges of education in Nigeria because of the small size of the whole population. For the study five instruments were used to collect data. They are: 1. Librarians' Productivity

Scale($r=0.71$).2.Job Motivation of Librarians Scale($r=0.87$).3.Librarians' Job Training Programme Scale($r=0.85$).4. Librarians Environmental Scale($r=0.88$).5.Ten sessions of in-depth interview (IDI) were conducted for chief librarians that were purposively selected from the six geo-political zones of Nigeria and in federal and state-owned colleges(the results of which were used to complement the results of instruments 1-4).

Results 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 instruments 1-4 were administered in all the 63 public colleges of education (federal and state) that existed as at 2011 in Nigeria. In all, 295 copies of instruments 1-4 were completed and retrieved making the response rate to be 82.87%. The results obtained from instruments1-4 were complemented with 10 sessions of in-depth interview(IDI) which were held with selected purposively chief librarians

Answer to the research questions

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

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

Table 1: 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?	103	34.9	45	45.3	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	102	34.6	27	102	34.6	108	36.6
How many professional conferences/seminars/workshops have you presented papers in the past 3 years?	105	35.6	73	105	35.6	73	105	35.6	16	5.4
How many chapters in books have you contributed in the past three years?	157	53.2	53	18.0	43	14.0	36	12.2	14	4.8
How many professional/academic journals have you co-authored with colleagues?	209	70.8	33	11.2	26	8.7	16	5.4	1	0.3
How many professional/academic books have you co-authored with colleagues?	212	71.9	31	10.5	24	8.1	19	6.4	4	1.4
How many bibliographies have you compiled in the past three years?	183	62	73	228	77	26.1	59	20.0	11	3.7
How many books have you reviewed in the past 3 years?	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?	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 a good number, 103 (34.9%) of the sampled librarians indicated that they

have not published any article in professional journals, 45 (15.3%) indicated that they have published one article in a professional journal, 77(26.1%) indicated they have published two articles, 59(20.0%) indicated that they have published three while 11(3.7%) indicated that they have published more than three articles in professional journals in the past three years. Moreover, the table shows that 102(34.6%) of the sampled librarians indicated that they have not published any article in professional journals, 27 (9.2%) indicated that they have published one article in a professional journal, 32(10.8%) indicated they have published two articles, 26(8.8%) indicated that they have published three, while 108(36.6%) indicated that they have published more than three articles in professional journals since they started their career.

Research Question 2: What is the influence of job motivation on the research productivity of librarians in colleges of education in Nigeria?

Table 2: Influence of Job Motivation on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	295	11.40	9.84	0.275	293	0.000	S
Job Motivation	295	22.76	6.81				

S= Significant at 0.05 level
Table 2 shows the correlation of job motivation and research productivity of librarians with values ($r=0.275$; $P<0.05$). Since P is less than 0.05, it shows that job motivation influences the research productivity of librarians to a significant extent.

Research Question 3: To what extent will age influence the research productivity of librarians in colleges of education in Nigeria?

Table 3: Influence of Age on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	228	11.40	9.84	0.167	226	0.06	S
Age	228	38.27	10.57				

S= Significant at 0.05 level

Table 3 shows the correlation of age and research productivity of librarians with values ($r=0.167$; $P<0.05$). Since P is less than 0.05, it shows that age has influence on the research productivity of librarians to a significant extent.

Research Question 4: 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 4: Influence of Conducive Environment on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pears on coefficient (r)	d f	P _{value}	Remark
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 4 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.

Hypothesis Testing

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

Hypothesis 1: Job status will not significantly influence the research productivity of librarians in colleges of education in Nigeria

Table 5: Influence of Job Status on Research Productivity of Librarians

	N	Mean	Standard Deviation	Pears on coefficient (r)	d f	P _{value}	Remark
Productivity	295	11.40	9.84	0.148	293	0.013	S
Job Status	283	2.71	1.50				

S= Significant at 0.05 level

Table 5 shows the correlation table of job status and research productivity of librarians with values ($r=0.148$; $P<0.05$). Since P is less than 0.05, it shows that job status has significant influence on research productivity of librarians.

Hypothesis 2: Gender will not significantly influence the research productivity of librarians in colleges of education in Nigeria

Table 6: Influence of Gender on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pears on coefficient (r)	D f	P _{value}	Remark
Productivity	295	11.40	9.84	-0.003	293	0.953	NS
Gender	287	1.39	0.488				

NS= Not Significant at 0.05 level

Table 6 shows the correlation table of gender and research productivity of librarians with values ($r=-0.003$; $P>0.05$). Since P is greater than 0.05, it shows that there is no significant influence of gender on research productivity of librarians.

Hypothesis 3: Internet connectivity will not significantly influence the research productivity of librarians in colleges of education in Nigeria,

Table 7: Influence of Internet Connectivity on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pears on coefficient (r)	D f	P _{value}	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 7 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.

Hypothesis 4: Participation in staff development will not significantly influence the research productivity of librarians in colleges of education in Nigeria

Table 8: Influence of Participation In Staff Development on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	295	11.40	9.84	0.374	293	0.000	S
Participation In Staff Development	295	16.69	4.78				

S= Significant at 0.05 level

Table 8 shows the correlation table of participation in staff development and research productivity of librarians with values (r=0.374; P<0.05). Since P is less than 0.05, it shows that participation in staff development has significant influence on research productivity of librarians.

Hypothesis 5: Educational qualification will not significantly influence the research productivity of librarians in colleges of education in Nigeria

Table 9: Influence of Educational Qualification on the Research Productivity of Librarians

	N	Mean	Standard Deviation	Pearson coefficient (r)	df	Pvalue	Remark
Productivity	295	11.40	9.84	0.249	293	0.000	S
Educational Qualification	284	2.25	1.62				

S= Significant at 0.05 level

Table 9 shows the correlation table of educational qualification and research productivity of librarians with values (r=0.249; P<0.05). Since P is less than 0.05, it shows that educational qualification influences the research productivity of librarians to a significant extent.

Hypothesis 6: Librarian related variables (job motivation, age, years of work experience, qualification, status), environmental factors (physical and social), training programme and collaboration will not have composite and relative effects on librarians' research productivity

Table 10: Regression Summary of Independent Variables on Librarians' Research Productivity

R = 0.471 R square= 0.222 Adjusted R square= 0.191						
Model	Sum of Squares	Df	Mean Square	F	Pvalue	Remark
Regression	5327.622	9	591.958	7.229	0.000	S
Residual	18670.698	228	81.889			
Total	23998.319	237				

Table 10 shows that the multiple correlation coefficient (R) indicating the relationship between the independent variables (job motivation, age, years of work experience, qualification, status), environmental factors (physical and social), training programme and collaboration with colleagues) and librarians' research productivity is 0.471; adjusted r² equals 0.191. This implies that the independent variables account for only 19.1% variation in librarians' research productivity. Further verification using regression ANOVA produced F_(9,228) = 7.229; P<0.05. This implies that the independent variables have significant composite influence on librarians' research productivity.

Research Productivity of Librarians in Colleges of Education in Nigeria

The findings of the study on research productivity of librarians is worrisome. The findings reveal that a good number of librarians are not so productive in terms of research productivity. For instance, 103 (34.9%) respondents have not published any articles in professional journals in the past three years, 45 (15.3%) have published one, 77 (26.1%) have published two, 59 (20.0%) have published three and 11 (3.7%) have published more than three. Moreover, a good number of the librarians have not published at all in professional journals since they began their career. This is represented by 102 (34.6%). Moreover, 209 (70.8%) have never co-authored any professional/academic colleagues in professional journals, 181 (61.4%) have not completed any researches in the past three years, and 194 (65.8%) do not have any on-going researches.

This apathy to publication is a source of great concern 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 adversely further affect publications output of librarians. The findings of the research agree with the findings of Adomi and Mordi (2003), who discovered that many librarians in university environment fall short of the required number of publications needed for promotion.

Influence of Job Motivation on the Research Productivity of Librarians in Colleges of Education in Nigeria

Findings of the research reveal that job motivation had significant influence on librarians' research productivity. The findings of the research supports Henman finding in 2007 who discovered that job motivation could be used by employers to get the best out of the employees. Similarly, the findings agree with the findings of Ibegbulum (2010) Hosoi(2010) and Parker(2010) who discovered that management who made judicious use of both human and material resources would succeed in bringing the best out of their work force. Moreover, the findings of the research affirm the findings of Owojori and Popoola (2009), Balogun, Oladipo and Odekunle (2010) who discovered that high productivity is dependent on the level of job motivation of the work force. The findings of the research also corroborates the findings of Amir and Sahibzada (2010), Pan and Hovde(2010) who opine that job motivation could not be treated in isolation of management.

Influence of Age on the Research Productivity of Librarians

The findings of the research indicate that age has significant influence on the research productivity of librarians. The findings of the research confirm the findings of Dennis (1966), Cole (1979), Over (1982), Skirbekk (2003), Goebel and Zwick (2009) who from their different researches discovered that age has direct positive significance on

research productivity. From the findings of the research 260(94.1%) respondents fall within the age brackets of 21-35, 36-45 and 46 - 60years. This figure is significant. Young men and women are renowned for youthful adventures. With adventures come discoveries, innovations and inventions. At the youthful age, all the sense organs of young men and women are working at optimum capacity. The reasoning, manipulative and calculative abilities are operating at the maximum level within the above - stated age brackets. In the present information society, young men and women with navigational and manipulative abilities in Information and Communication Technology (ICT) are exerting a lot of positive influence on their respective communities.

Library management should do everything possible to retain young men and women in their college libraries. They are to provide suitable and satisfying working conditions with a view of retaining these young men and women in their organisation. This is because, if the working environment is not suitable to a young librarian, he would not think twice before leaving such establishment for better or unsure job. This corroborates the view of Ndagana (2007), who reveals that younger people are willing to quit their job in the presence or absence of any alternatives than the older workers. Library management while trying to do everything possible to satisfy and retain the younger librarians should not lose focus of older librarians. Library management should bear in mind that old librarians are more stable and consistent on their chosen career than younger ones. They are likely to remain on the job in the face of seemingly unpleasant working conditions than young librarians. The cumulative effect of their consistency, stability, experience and exposure on the job would in all probability result in high productivity. In other words, due to their stability and experience on the job, older librarians are most likely to be productive on the job than younger librarians. This view is supported by Skirbekk(2003) and Ndagana (2007). Library management are strongly admonished never to lose focus of the two groups -

younger and older librarians. A tactical and rational combination of the younger and older hands would likely result in a formidable army of workers. It is only by keeping productive young and old librarians in the college library that a bright future could be guaranteed and a befitting legacy preserved.

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 avers 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 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 aver that workers normally evaluate themselves in terms of the environment in which they work. Since conducive environment has 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 for the librarians.

Influence of Job Status on the Research Productivity of Librarians

The findings of the research show that job status had significant influence on the research productivity of librarians with the weighted mean (\bar{X}) of 2.71 and standard deviation (S) of 1.50 respectively (with values $r=0.148$, $P<0.05$). This finding conforms with Herzberg's Two Factors Theory - Motivation-Hygiene. Herzberg (1966), identified recognition as a motivating factor in his theory. One of the major avenues by which library management could

motivate librarians is to recognise them for a job well done. When librarians are recognised for a job well done, they would be happy and would be willing to do more. Moreover when they are recognised for their contributions and achievement, they tend to have a sense of belonging and be willing to stay on the job. A good way of recognising a productive librarian is to promote such an officer. With promotion comes other benefits like enhanced salary, fringe benefits and enhanced job status. In the in-depth interview(IDI) conducted with the chief librarians, majority of them affirmed that they have been giving all necessary encouragement to their librarians so that they could meet the promotion criteria in the college. They stated further that they have been allowing them to go for workshops, conferences and that they have been allowing them to interact with other experienced colleagues so as to get more exposure on ways and modalities of publishing quality research works; which is one of the criteria that are used for promoting librarians in colleges of education in Nigeria.

Influence of Gender on the Research Productivity of Librarians

Findings of the research indicate that gender did not have any significant influence on librarians' research productivity with weighted mean (\bar{X}) of 1.39 and standard deviation (S) of 0.488 respectively (with values $r=0.003$, $P>0.05$). The findings of the research conform with the findings of Korytnyk (2000) who discovered that male and female PhD holders in librarianship published alike quantitatively. Similarly, the findings of the research support Popoola (2005) findings that both male and female workers are equally committed to their job. Findings of the research, however, did not support the findings of Symonds, Gernmell, Braisher, Gorringer and Elgar (2006) who carried out a survey in the life sciences departments of British and Australian universities. Their findings show that on the average, male publish more papers than their female counterparts. On the

average, men publish almost 40 percent more papers than women. They discovered further that women take up to five years into their careers to achieve the same annual rate of publications output as men have at two years. They, however, discovered to the credit of the female researchers that they produce fewer but higher quality publications. The finding of Symonds, Gernmell, Braisher, Gorrige and Elgar (2006) are not totally out of place in this study. Their findings are still relevant and illuminating to the research. It might be necessary to infer from their findings that women in faculty positions who are encumbered with extra non-research responsibilities are not likely to get time to publish compared with their male colleagues who are not saddled with such responsibilities.

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 finding 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 reports 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 who avail themselves of the publishing opportunities via the Internet are most likely to be productive in terms of publications output. 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.

Influence of Participation in Staff Development on the Research Productivity of Librarians

Findings of the research show that participation in staff development had significant influence on the research productivity of the librarians with weighted mean(\bar{X}) of 16.69 and standard deviation (S) of 4.78 respectively (with values $r= 0.374$; $P < 0.05$). The findings of the research corroborates the findings of Ngulube (2000), Stonner (2000), Poole (2002), Akintunde (2006), and a good number of other researchers. Ngulube (2000), in a study carried out at National Archives of Zimbabwe identified absence of adequate staff development amongst other factors as the main reason for the massive turn-over of staff. In the IDI conducted, a good number of the chief librarians indicated that they have been allowing their librarians to go for training in form of workshops, conferences and seminars on annual basis.

Influence of Educational Qualifications on the Research Productivity of Librarians

Findings of the research show that educational qualification(s) had significant influence on the research productivity of librarians with weighted mean(\bar{X}) of 2.25 and standard deviation (S) of 1.62 respectively (with values $r= 0.249$; $P < 0.05$). The results of the research agree with the findings of Edem (2004) who discovered that academic qualifications significantly influence the research productivity of academic librarians. Similarly, the findings of the research agree with the findings of Olaniyan. Olaniyan (1992), in a study carried out among non-academic staff of colleges of education in Oyo and Osun States, identified educational

qualification(s) as the most significant predictor of research productivity as it accounted for 57 percent of the variance in job performance. In the IDI conducted, a good number of chief librarians stated that they have been sponsoring and supporting librarians in their colleges to go for further formal training in library schools to obtain master's degree in library science and PhD in library science as the situation demands. Majority of the chief librarians stated further that they have been giving all forms of encouragement to their staff members who have been on study for long so that they could complete on time and return to their respective libraries to contribute their own quotas to the success of the libraries. The position of majority of the chief librarians on the training of their staff members is highly encouraging and instructive.

Influence of Librarian Related Variables (Job Motivation, Age, Year of Work Experience, Qualification, Job Status), Environmental Factors (Physical and Social), Training Programme and Collaboration on the Research Productivity of Librarians.

Findings of the research show that the independent variables (when grouped together) had significant composite influence on librarians' research productivity. The findings of the research corroborate the findings of many researchers who discovered that job motivation could not be treated in isolation of the associated working conditions. Findings of the research agree with the study of Lindner. Lindner (1998), carried out a study at the Ohio State University's Piketon Research and Extension Centre and discovered that employee job motivation entails the following amongst others: interesting work; good wages; full appreciation of work done; job security; good working conditions; promotion and growth in the organisation; feeling of being involved in organisational activities; personal loyalty to employees; tactful discipline; and sympathetic help with personal problems. Similarly, findings of the research agree with the findings of Amir and Sahibzada. Amir and Sahibzada (2010) in

their study of private sector companies of Pakistan discovered that behavioural components of office environment have the greatest impact on the performance level of the office employees and the levels of interaction, in terms of: social, work, position relative to colleagues; position relative to equipment and quality of refreshment have strong positive influence on the output of the employees.

Management should do everything possible to identify precisely what the composite needs of the librarians are; and do everything possible to meet such needs quantitatively, qualitatively and appropriately. In other words, management should first of all consider the influence of each of the independent variables separately on the research productivity of librarians. The horizontal/symbiotic/joint relationship among the independent variables as they influence the research productivity of librarians should then be considered and provided for so as to optimise the research productivity of librarians.

**Summary, Conclusion and Recommendations
Summary of Major Findings**

The major findings of the study are as follows:

1. Majority of the sampled librarians in colleges of education in Nigeria were not so productive in terms of research productivity
2. Job motivation had positive significant influence on the research productivity of the librarians in Nigeria's colleges of education.
3. Age had significant influence on the librarians' research productivity.
4. Conducive work environment had significant influence on librarians' research productivity.
5. Job status had significant influence on librarians' research productivity.
6. Gender did not have significant influence on librarians' research productivity

7. Internet connectivity had significant influence on research productivity of the librarians
8. Participation in staff development programme had significant influence on research productivity of the librarians.
9. Educational qualification(s) had significant influence on research productivity of the librarians.
10. Independent variables (when grouped together) had significant composite influence on research productivity of the librarians.

Conclusion

It is obvious from the study that the level of the research productivity of majority of the sampled librarians in colleges of education in Nigeria is low (Table 1). Similarly, age, conducive office environment, job status and Internet connectivity significantly influenced the research productivity of librarians with values ($r = 0.167$; $P < 0.05$), ($r = 0.197$; $P < 0.05$), ($r = 0.148$; $P < 0.05$), and ($r = 0.137$; $P < 0.05$) respectively. Moreover, gender did not have significant influence on the research productivity of the librarians with value ($r = 0.003$; $P > 0.05$). Finally, the independent variables (of job motivation, demographic and environmental factors) had significant composite influence on librarians' research productivity with the correlation coefficient (R) of 0.471; adjusted R^2 equals 0.191.

Recommendations

The following recommendations are made in line with the findings of the research:

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 not so productive in terms of research productivity. Low productivity portends danger to both the librarians and

the college authorities. To the librarians, low productivity is symptomatic of redundancy and idleness. This means, if there is any need to "down size", "right size" or "lay off" workers, such librarians might lose their job. It is, therefore, mandatory for the affected librarians to do everything possible to optimise their research productivity and still remain relevant, employable, and profitable to themselves and their respective employers.

2. College authorities should do everything possible to employ young men and women alike into the college libraries. Findings of the research show that men and women are equally productive. Therefore, recruitment into the college libraries should be on 50-50 basis of both male and female librarians. Furthermore, the study shows that chronological age is directly related to the research productivity of the librarians. It would therefore be wise for college authorities to employ young librarians so as to benefit from their services for a long period of time before retirement. By employing young men and women, there is every possibility that they would learn on the job, gain more experience and become productive with time.
3. 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 reveal that Internet connectivity has significant influence on the research productivity of librarians in colleges of education in Nigeria.
4. Librarians are admonished to do everything possible to develop themselves on the job irrespective of the work environment that they are found. They should do everything possible to get relevant additional qualifications and make

other staff development programmes as seamless as possible to their daily office routine

Contribution to Knowledge

The findings of the research show that job motivation, demographic and environmental factors (when grouped together) influenced the research productivity of the librarians in the colleges of education in Nigeria. The results of the study unlike the previous studies in the literature show that all the independent variables (job motivation, demographic and environmental factors) should be taken holistically and never in isolation of one another if the research productivity (dependent factor) of the librarians is to be optimised. The study shows a positive correlation between job motivation and research productivity, demographic factors and research productivity, environmental factors and research productivity. However, librarians' research productivity would reach optimum if all the influencing independent variables (job motivation, demographic and environmental factors) are grouped together.

The varying degree of the independent variables are not mutually exclusive of one another. They are mutually inclusive. They have joint or composite influencing tendencies on the research productivity of the librarians. For instance, in the light of the study, college authorities should not feel that the moment they lavish librarians with money that would be enough to optimise their research productivity. Librarians might get fat salaries and still remain unproductive. Rather, the college authorities in addition to giving fat salaries to the librarians should provide conducive working environment; provide adequate working tools; put in place policies that are amenable to librarians' professional development etcetera. To stem the tide of job turn-over in colleges of education, the study reveals that college authorities should be forward and outward looking. There is need for college authorities to compare the working conditions of the librarians in the colleges of

education with the working conditions of librarians in comparable organisations for anticipated optimum research productivity

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