3-28-2018

Knowledge of Electronic Databases as Predictors Research Productivity of Academic Staff in Nigerian Private Universities

ADETOMIWA BASIRU
Redeemer's University, tommybashy06@yahoo.com

Oshiotse Andrew Okwilagwe
LIBRARY, ARCHIVAL AND INFORMATION STUDIES DEPARTMENT UNIVERSITY OF IBADAN OYO STATE, NIGERIA

EMMANUEL LAYI ADEBAYO
Redeemer's University (RUN)

Introduction

Research productivity in academic institutions is reflected in the number and quality of articles published by the affiliated faculty. Often, departments evaluate their faculty on their "publication count" (Jaunch and Glueck, 2010). Research Productivity is combination of two words. Goodall, Amanda and Singell (2014) define "Research" and "Productivity". "Research" means very careful, observant, and vigilant study or investigation of phenomena, particularly to search and find out new particulars, information and facts. While "Productivity" means production or output, produced in duration of time. Iqbal and Mahmood (2011) observe that research productivity and research activity are interrelated. Research means to conduct research, collecting data and analyzing of data. Productivity means writing, reading and publication of research reports in professional referred journals, displaying on the web or to make it known to public through any other means, in shape of books or making its presentation on the television or radio.

The ability to use e-databases efficiently depends on basic computer skills, knowledge of what is available and how to use it, and ability to define a research problem. Electronic databases are vital in modern day research in the universities. Electronic databases are usually collections of e-journals and e-books in order to provide cost effective access to these e-resources to the end-users (academic staff). The contents of each database vary from discipline to discipline. Examples are MEDLINE, ScienceDirect, AGORA, HINARI, Lexis-Nexis, EBSCHO HOST among others. The e-databases have provided many possibilities and opportunities for providing faster and quicker access to information.

Knowledge refers to a theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicit (as with the theoretical understanding of a subject); it can be more or less formal or systematic. The quality and depth of the knowledge content of a society, therefore, determines its strength, its prospects and its future. However, for researchers to access information in cyberspace, they must have Internet knowledge and skills; they are also required to possess a corresponding electronic technology such as computer, good Internet services and stable and regular power supply, and also have access to current information materials (Arunachalam, 2003).

Knowledge is originated from the intelligence of individuals and is visible in the tasks, systems, procedures, norm and customs and is really difficult to imitate. Academic staff are

lecturers ranging from graduate assistant cadre to professorial cadre in the context of Nigerian universities. Academic staff in any higher institution, especially universities, are provided with the opportunity to focus on an area of inquiry, develop a research program and later share the knowledge with students and others in the drive to develop professional skills and impact on a field of specialization and society, as a whole.

knowledge of electronic databases are vital in teaching, learning, research and community service by academic staff. They are available in universities in Nigeria courtesy of government, universities, Non Governmental Organisations (NGOs), external agencies /donors, and private individuals' organisations. But there is low use of scholarly electronic publications by academic staff in Nigerian universities compared to their counterparts in developed countries. Ray and Day (1998) stated that in order to utilise the growing range of electronic resource, there is need to acquire and practice the skills necessary to exploit them. These skills, according to Dittion (1990) include a knowledge of the structure of the database, and the instructions which must be input into the computer by the searcher, as well as an understanding of the ways in which the instructions are linked with one another. In the light of the foregoing analysis, this study will investigate why academic staff in private universities in South-west, Nigeria has not maximised the utilisation of electronic databases to enhance research productivity.

Objectives of the study

The main objective of the study was to investigate knowledge of electronic databases as predictors research productivity of academic staff in Nigerian private universities. The specific objectives were to:

    i.   ascertain the knowledge of academic staff on the use of electronic databases in private universities in South-west, Nigeria; and

    ii.   determine how academic staff utilisation of electronic databases predicts research productivity in private universities in South-west, Nigeria.

Research questions

The study sought answers to the following research questions:

1. What is the knowledge possessed by academic staff in the use of electronic databases in private universities in South-west, Nigeria?

2. What is the extent to which the use of Electronic Databases by academic staff has improved Research Productivity?

Hypothesis

The below null hypothesis was tested in the study at 0.05 level of significance:

Ho$_1$:   There is no significant relationship between knowledge of electronic databases and research productivity of academic staff in private universities in South-west, Nigeria.

Literature Review

Okonedo, Popoola, Emmanuel and Bamigboye (2015) stated that Research productivity, is expressed by the entirety of researches conducted by academic librarians in universities in his or her career over a specified time frame. With reference to higher education, research productivity means impactful research output, their publications as papers in professional journals, and books or presentation at conferences and consequent appearance in conference proceedings.

In most sub-Saharan Africa countries, including Nigeria, research and development is at low. Ochai and Nedosa (2008) stated that in Universities in the world over, recognition and advancement of academic staff rest largely on the quantity and quality of their research outputs. Ochai and Nedosa (2008) went further to report that the fruits of research are new knowledge and facts, which are communicated to the academic community through scholarly publications and seminars. They argued further that in Universities all over the world, recognitions and advancement of individual academic staff members depend greatly on the quantity and quality of their research output, which are communicated in form of journal articles, books, technical reports and others. One of the reasons given for low research output and effectiveness in Africa including Nigeria is an inadequate of information resource. The comparatively lower research output of researchers in Nigeria and other developing countries reported in some studies may be due to knowledge of electronic databases and lack of access to adequate information resources.

Ansari and Zuberi (2010) establish that a large majority (78.5 percent) know about electronic resources. Lack of knowledge and networking problems are the main reasons for not using electronic resources. The Significant amount of academics (90%) believe electronic resources are reliable, however majority of the respondents consider only those electronic resources are reliable which are produced by authentic organization or publisher. Supporting the

above view Zin et al (2000) observed that, knowledge, skill and competence with computer technology are now an asset for those entering the competitive employment market.

Knowledge of modern ICT is a factor that influences lecturers' utilisation of electronic databases for research purpose. Information and communication technologies have resulted in a need for the learning of new skills, abilities, and capabilities/competences to effectively and efficiently handle job related tasks in electronic environment. Knowledge, skill and competence with computer technology are now vital assets for all employees in institutions and organisations (Zin et al., 2000). For instance a study of faculty's use of electronic resources found that use was influenced by such factors as computing skills of academic (Waldman, 2003). Hence lecturers' computing skills may have considerable influence on utilisation of electronic databases.

The study by Fayemi (2013) at five federal universities combined interviews and survey to assess the knowledge of lecturers and librarians about basic matters of copyright related with common academic practices, the findings reflected numerous errors and misconceptions, although the librarians were found to be a step ahead of the lecturers. A similarly poor level of knowledge was demonstrated by academic librarians in universities in United State of America (U.S.A). In a study by Smith (2001) among librarians in health science faculty of two U.S. universities (University of Alabama at Birmingham and the University of Texas Health Science Center at San Antonio) used a web survey to determine the librarians´ level of knowledge regarding copyright law and fair use. The results made manifest a lack of familiarity with these matters on the part of the professors, along with a noteworthy degree of agreement among respondents from both universities to almost all of the questions.

Nwokedi (2011) evaluated University of Jos lecturers' knowledge of the existence of IR and willingness to submit research works, and found that majority (79%) of the respondents did not have any idea of Open Access IR and only 21% of the respondents claimed to be aware of the existence of IR in their institution. Abdullahi and Haruna (2008) found that lack of basic knowledge of ICT is the second major constraint after the problem of erratic power supply with the use of ICT in the university libraries in Adamawa State, Nigeria. This was corroborated by Saka and Abdulrahman (2008). Though the percentage that represents the hypothesis is low has compared to other constraints such as erratic power supply, networking, and availability of equipment, etc. The Internet is an instrument or vehicle used for searching, retrieving and disseminating information across the globe (Adeogun, 2003).

The ability to use the electronic databases by academics' is likely to be influenced by their knowledge. That is, academics' perception about their capacity to work effectively using the databases will stand as a factor in determining their patterns of information usage. As a result of these influences, knowledge of electronic databases is a strong determinant or predictor of level of utilisation electronic databases for research productivity.

Methodology

The population for this study were lecturers in the twenty (27) private universities in South-west, Nigeria. Twenty-one (21) out of the twenty seven (27) private universities established and approved between 1999 and 2012 in South-west, Nigeria were purposively covered in the study. (Table: 3.2)

The stratified random sampling technique based on probability proportionate to size method was adopted in selecting 1656 (60%) academic staff from the population size of 2760 in the Twenty-one (21) private universities established and approved between 1999 and 2012 in South-west, Nigeria. The main research instruments used to collect data for the study was questionnaire.

Data generated were analysed using descriptive and inferential statistics. Descriptive staticstics of frequency counts, standard deviation, mean and simple percentages were employed to analysed the demographic information and research questions, Spearman's rank was used to test hypotheses at 0.05 level of confidence.

In each selected private universities, 60% of the total estimated population of academic staff were selected for the study. Consequently, a sample size of 1,656 were selected for the study. See table 1.1

Table 1.1 Selected private universities and their population

	Name of universities	Year approved	No. of Academic staff	Sample Size 60%
1.	Achievers University, Owo	2007	78	46.8
2.	Adeleke University, Ede	2011	66	39.6
3.	Afe Babalola University, Ado-Ekiti - Ekiti State	2009	213	127.8
4.	Ajayi Crowther University, Oyo	2005	119	71.4

5.	Babcock University,Ilishan-Remo	1999	372	223.2
6.	Bells University of Technology, Otta	2005	107	64.2
7.	Bowen University, Iwo	2001	310	186
8.	Caleb University, Lagos	2007	72	43.2
9.	Covenant University, Ota	2002	319	191.4
10.	Crawford University, Igbesa	2005	65	39
11.	Crescent University, Abeokuta	2005	104	62.4
12.	Elizade University, Ilara-Mokin	2012	54	32.4
13.	Fountain Unveristy, Oshogbo	2007	89	53.4
14.	Joseph Ayo Babalola University, Ikeji-Arakeji	2006	171	102.6
15.	Lead City University, Ibadan	2005	129	77.4
16.	Mcpherson UniversSity, Seriki Sotayo, Ajebo	2012	49	29.4
17.	Oduduwa University, Ipetumodu - Osun State	2009	67	40.2
18.	Pan-Atlantic University, Lagos	2002	132	79.2
19.	Redeemer's University, Ede	2005	154	92.4
20.	South-western University, Ijebu Ode.	2012	41	24.6
21.	Wesley Univ. of Science & Tech.,Ondo	2007	49	29.4
	Total		**2,760**	**1,656**

RESULTS AND DISCUSSION

Table 1.2 Knowledge of Academic Staff on the Use of Electronic Databases in Private universities in South-West, Nigeria (N=657)

S/No.	Items	Strongly Agree (4) N (%)	Agree (3) N (%)	Disagree (2) N (%)	Strongly Disagree (1) N (%)	Mean ($\bar{x}$)	Std.D
	Information Searching Skills						
1	I can use input devices like mouse/arrow key to navigate and locate files in e-databases	198 (30.1%)	361 (54.9%)	21 (3.2%)	77 (11.7%)	2.96	0.89
2	Operations of modern e-databases facilities are so easy.	203 (30.9%)	263 (40.0%)	78 (11.9%)	113 (17.2%)	2.76	1.03
3	I can limit e-databases search by fields	115 (17.5%)	361 (54.9%)	73 (11.1%)	108 (16.4%)	2.64	0.90
4	I usually peruse contents from open access journals, repositories, electronic theses and dissertations.	94 (14.3%)	398 (60.6%)	57 (8.7%)	108 (16.4%)	2.63	0.86

5	Boolean operators, AND, OR are the best strategies for searching e-databases	104 (15.8%)	274 (41.7%)	171 (26.0%)	108 (16.4%)	2.57	0.94
	Location of Information Sources						
6	I usually retrieve scholarly content from e-database	218 (33.2%)	305 (46.4%)	57 (8.7%)	77 (11.7%)	2.93	0.94
7	I can navigate the internet/www using functional keys like back, forward, reload, stop, refresh, go, home, etc	144 (21.9%)	331 (50.4%)	105 (16.0%)	77 (11.7%)	2.89	0.91
8	As an academic staff, I understand everyday online search tools	118 (18.0%)	275 (41.9%)	185 (28.2%)	79 (13.0%)	2.77	0.81
9	As an individual I can use truncation search techniques	141 (22.5%)	114 (17.4%)	263 (40.0%)	139 (21.2%)	2.26	0.98
	Ease of Use						
10	I often use e-databases in my research and teachings	129 (19.6%)	392 (59.7%)	57 (8.7%)	79 (12.0%)	3.02	0.71
11	As an individual I understand the need to use appropriate search tools.	144 (21.9%)	326 (49.6%)	139 (21.2%)	48 (7.3%)	3.01	0.68
12	There is no restriction to the number of articles downloaded	77 (11.7%)	361 (54.9%)	171 (26.0%)	48 (7.3%)	2.85	0.62
13	I always find it easy downloading files from on-line database	113 (17.2%)	264 (40.2%)	186 (28.3%)	94 (14.3%)	2.73	0.85
14	e-databases is usually my first priority when sourcing for materials for my work.	46 (7.0%)	320 (48.7%)	243 (37.0%)	48 (7.3%)	2.68	.61
15	I usually self-archive my works on the internet	94 (14.3%)	316 (48.1%)	139 (21.2%)	108 (16.4%)	2.49	0.87
	Practical skill or Expertise						
16	Internet is always available to use e-database	165 (25.1%)	341 (51.9%)	48 (7.3%)	103 (15.7%)	3.10	0.66
17	I have good searching skills to use e-database	160 (24.4%)	305 (46.4%)	144 (21.9%)	48 (7.3%)	3.03	0.71
18	I am skillful in downloading articles in e-databases	160 (24.4%)	269 (40.9%)	180 (27.4%)	48 (7.3%)	2.97	0.75
	Theoretical Understanding						
19	I find e-databases easy in accessing journal articles	77 (11.7%)	434 (66.1%)	98 (14.9%)	48 (7.3%)	2.97	0.54
20	Databases are user friendly and flexible to navigate	77 (11.7%)	434 (66.1%)	67 (10.2%)	79 (12.0%)	2.91	0.66
21	Database requires serious mental efforts to use.	98 (14.9%)	244 (37.1%)	267 (40.6%)	48 (7.3%)	2.72	0.72
	Experience						
22	I have ability to compare and evaluate information obtained from different e-databases sources	109 (16.6%)	341 (51.9%)	159 (24.2%)	48 (7.3%)	2.92	0.66
23	I have search techniques to retrieve information effectively from e-databases	79 (12.0%)	465 (70.8%)	67 (10.2%)	46 (7.0%)	2.79	0.65
	Intellectual Property						
24	Copyright protection arises upon the creation of an original work or	201 (30.6%)	273 (41.6%)	104 (15.8%)	79 (12.0%)	3.06	0.84

	authorship						
25	I fully understand when you need a license agreement to use somebody else's contents.	139 (21.2%)	289 (44.0%)	150 (22.8%)	79 (12.0%)	2.88	0.82
26	My institution has a license agreements in place with the owners of rights to use the contents	134 (20.4%)	201 (30.6%)	197 (30.0%)	125 (19.0%)	2.64	0.96

Source: Field survey (2017)

Table 1.2 revealed the knowledge of academic staff on the use of electronic databases in private universities in South-west, Nigeria. In information searching skills, the finding revealed that 559 (85.0%) of respondents can effectively use input devices like mouse, arrow keys and can locate files in e-database. Also, a significant number (70.9%) of respondents that agreed that operations of modern e-database facilities are so easy (mean=2.76, and majority (72.4%) of respondents can limit e-database search (mean=2.64) and usually peruse contents from open access journals, repositories, electronic theses and dissertations (mean=2.63).

The result also shown that more than 77.0% of respondents can retrieve scholarly contents from e-database, can use truncation search techniques and can navigate the internet through functional keys like back, forward, reload, stop, refresh, go, home and so on. It is also revealed that, most (79.3%) of respondents used e-database in their research and teachings (mean=3.02). This is because majority of the respondents (71.5%) understand the need to use appropriate search tools. Also, 438 respondents representing 66.6 per cent claimed that there is no restriction to the number of articles to be downloaded, therefore, a significant number of them (57.4%) find downloading files easy from on-line database.

The result further shown the practical skill of the respondents, and more than 70 per cent of respondents have good searching skills and skillful in downloading articles from e-database. Also, about 73.0% of respondents concurred that internet need to be available before a person can use e-database (mean=3.10, SD=0.66). Besides, the finding also reveals the theoretical understanding of the respondents, and most respondents find e-database easy in accessing journal articles (mean=2.97, SD=0.54), followed by those that support that database are user friendly and flexible to navigate (mean=2.91, SD=0.66).

On the other hand, the result of respondents' experience in the use of electronic databases shown that 544 (82.8%) and 450 (68.5%) of respondents have search techniques and ability to retrieve information and to compare or evaluate information obtained from different e-database

sources respectively. Finally, the result of intellectual property of respondents on the use of electronic databases exemplified that copyright protection arises upon the creation of an original work or authorship (mean=3.06, SD=0.84). Therefore, above 340(65.2%) respondents are well understood that license agreement is need to use somebody else's content and 435 (51.0%) of respondent consent that their institution has a license agreements in place with the owners of right to use the contents.

Table 1.3 Extent to which the use of Electronic Databases by academic staff has improved Research Productivity

S/No.	Research Productivity	Greatly improved (4) N (%)	Averagely improved (3) N (%)	Improved (2) N (%)	Not improved (1) N (%)	Mean ($\bar{x}$)	Std.D
1	Teaching	294 (44.7%)	196 (29.8%)	119 (18.1%)	48 (7.3%)	3.29	0.77
2	Research publications	299 (45.5%)	160 (24.4%)	150 (22.8%)	48 (7.3%)	3.24	0.82
3	Lecture series materials	227 (34.6%)	108 (16.4%)	228 (34.7%)	94 (14.3%)	3.11	0.79
4	Innovation	248 (37.7%)	124 (18.9%)	222 (33.8%)	63 (9.6%)	3.04	0.89
5	Datasets	227 (34.6%)	221 (33.6%)	161 (24.5%)	48 (7.3%)	2.97	0.88
6	Community service	294 (44.7%)	196 (29.8%)	119 (18.1%)	48 (7.3%)	2.85	1.01
7	Curriculum development	180 (27.4%)	202 (30.7%)	150 (22.8%)	125 (20.0%)	2.80	1.00
8	Models	139 (21.2%)	176 (26.8%)	178 (27.1%)	164 (25.0%)	2.70	1.05
9	Carrying out editorial duties	186 (28.3%)	172 (26.2%)	222 (33.8%)	77 (11.7%)	2.69	1.04
10	Web pages	191 (29.1%)	124 (18.9%)	212 (32.3%)	130 (19.8%)	2.66	1.00
11	Supervision of post-graduate students on dissertations and class projects	156 (23.7%)	284 (43.2%)	104 (15.8%)	113 (17.2%)	2.64	0.98
12	Engaging in public debates and commentaries	82 (12.5%)	310 (47.2%)	125 (19.0%)	140 (21.3%)	2.63	0.90
13	Development of computer programs	191 (29.1%)	242 (36.8%)	140 (21.3%)	84 (12.8%)	2.48	1.12
14	Producing works of an artistic or creative nature	67 (10.2%)	222 (33.8%)	152 (21.6%)	226 (34.4%)	2.21	1.06
15	Development of experimental designs	94 (14.3%)	201 (30.6%)	192 (29.2%)	170 (25.9%)	2.20	0.93
16	Obtaining research grants	63 (9.6%)	207 (31.5%)	94 (14.3%)	293 (44.6%)	1.91	.96
17	Obtaining patents and licenses	36 (5.5%)	165 (25.1%)	142 (21.6%)	314 (47.8%)	1.87	1.00
		Weighted Average	**=**	**2.71**			

Table 1.3 Shows extent to which the use of Electronic Databases by academic staff has improved Research Productivity. From the result, it shows that the use of Electronic Databases

by academic staff has improved teachings (mean=3.29, SD=0.77), research publications (mean=3.24, SD=0.82), lecture series (mean=3.11, SD=0.79), innovation (mean=3.04, SD=0.89), dataset (mean= 2.97, SD=0.88) and community services (mean=2.85, SD= 1.00) of academic staff.

Hypothesis 2 (Ho$_2$): There is no significant relationship between knowledge of electronic databases and research productivity of academic staff in private universities in South-west, Nigeria.

Table 1.4:   Summary of the Correlation Matrix Showing Relationship of Knowledge of Electronic Database and Research Productivity

		Research productivity	Information Searching Skills	Location of Information Sources	Ease of Use	Practical Skill or Expertise	Thorectical Understanding	Experience	Intellectual Property
Spearman's rho Research Productivity	Correlation Coefficient	1.000	.168**	.379**	.344**	.448**	.297**	.497**	.627**
	Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.000
	N	609	609	609	609	609	609	609	609
Information Searching Skills	Correlation Coefficient	.168**	1.000	.625**	.473**	.472**	.215**	.200**	.016
	Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.695
	N	609	657	609	609	609	609	609	609
Location of Information Sources	Correlation Coefficient	.379**	.625**	1.000	.643**	.714**	.402**	.462**	.218**
	Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.000
	N	609	609	609	609	609	609	609	609
Ease of Use	Correlation Coefficient	.344**	.473**	.643**	1.000	.688**	.417**	.410**	.210**
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.000
	N	609	609	609	609	609	609	609	609
Practical Skill or Expertise	Correlation Coefficient	.448**	.472**	.714**	.688**	1.000	.630**	.696**	.315**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000
	N	609	609	609	609	609	609	609	609
Thorectical Understanding	Correlation Coefficient	.297**	.215**	.402**	.417**	.630**	1.000	.594**	.377**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000	.000
	N	609	609	609	609	609	609	609	609
Experience	Correlation Coefficient	.497**	.200**	.462**	.410**	.696**	.594**	1.000	.715**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	.000
	N	609	609	609	609	609	609	609	609
Intellectual Property	Correlation Coefficient	.627**	.016	.218**	.210**	.315**	.377**	.715**	1.000
	Sig. (2-tailed)	.000	.695	.000	.000	.000	.000	.000	.
	N	609	609	609	609	609	609	609	609

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

The result on Table 1.4 shows the correlation matrix showing the relationship among information searching skills, location of information sources, ease of use, practical skill or expertise, theoretical understanding, experience, intellectual property and research productivity of academic staff in private universities in South-West Nigeria. It shows there is significant positive correlation among information searching skills and research productivity (r = 0.168; p<0.05). Location of information source and research productivity of academic staff also had a statistical significant positive correlation among them (r= 0.379; p<0.05). Similarly, ease of use and research productivity also had a significant positive correlation (r = 0.344 ; p<0.05).

The result further shows that there is significant positive correlation among practical skill or expertise and research productivity (r = 0. 448 ; p<0.05). Theoretical understanding and research productivity also had significant positive correlation among them (r = 0.297; p<0.05). Also, experience and research productivity had significant positive correlation (r= 0. .497; p<0.05) and intellectual property and research productivity also had significant positive correlation among them (r= 0.627; p<0.05). Hence, the hypothesis is rejected in favour of information searching skills, location of information sources, ease of use, practical skill or expertise, experience and intellectual property of academic staff.

DISCUSSION OF FINDINGS

Result on the knowledge possessed by academic staff in the use of electronic databases indicated that high proportions of academic staff in private universities have good knowledge of electronic databases. In information searching skills, the finding revealed that most respondents can effectively use input devices like mouse, arrow keys and can locate files in e-database. Also, a significant number of respondents agreed that operations of modern e-database facilities are so ease. Information searching skill is another factor that was significant in this study. This factor is significant because parameters used to assess this factor revealed that majority of the academic staff possess good searching skills to use electronic databases and also they can search the databases independently. Most of the academic staff can also use different keywords to search for information in electronic databases. On the whole, information searching skill of academic staff and operations of modern e-database facilities was found to be significantly correlates with

utilisation of electronic databases thus becoming a significant factor influencing utilisation of e-databases by academic staff in private universities in South-west, Nigeria.

This result corroborates the findings of Day (1998) citing Dutton (1990) that the skills required to maximize the potential of electronic information resources are much greater than those required for searching printed sources. Such skills are knowledge of the structure of the database and the instructions which must be inputted into the computer by the searcher, as well as an understanding of the ways in which the instructions are linked with one another. This result is an improvement on earlier findings reported by Harle (2010) that the ability of academics and students to search effectively is underdeveloped. In Nigeria, Adeleke et al (2014) also reported that the proportion of I.T. skilled health information professionals currently possess Internet searching skills is low and not encouraging. A study by Sangowusi (2003) on problems of accessing scholarly publications by Nigerian scientists revealed that only 32.8 percent of respondents owned a personal computer. Search and discovery skills were often under-developed. Many researchers were unable to find and download what they need and many were not aware of the resources available to them. One the problems affecting the utilisation of electronic resources, Ibrahim (2004) identified lack of user skills, lack of technical support and insufficient spare parts as some of the major constraints to effective utilisation of electronic resources in many libraries in the developing countries including Nigeria.

The result also shows that more than 77.0% of respondents can retrieve scholarly contents from e-database, can use truncation search techniques and can navigate within the electronic databases. It is also revealed that most of respondents used e-database in research and teachings.

This is because majority of the respondents understand the need to use appropriate search tools. The result further shows the practical skill of the respondents, and more than 70 per cent of respondents have good searching skills and skillful in downloading articles from e-database. Supporting the above result, Zin et al (2000) observed knowledge, skill and competence with computer technology are now an asset for those entering the competitive employment market. Every aspect of life from education, leisure and work environment to social interaction is being influenced by computer technology. The result obtained in this study is however at variance with the findings of Nwokedi (2011) who evaluated University of Jos lecturers' knowledge of the existence of IR and willingness to submit research works, and found that majority (79%) of the

respondents did not have any idea of Open Access IR and only 21% of the respondents claimed to be aware of the existence of IR in their institution.

Furthermore, about 73.0% of respondents concurred that internet need to be available before a person can use e-database. Besides, the finding also revealed the theoretical understanding of the respondents, and most respondents find e-database easy in accessing journal articles. On the other hand, the result of respondents' experience in the use of electronic databases shown that 544 (82.8%) and 450 (68.5%) of respondents have search techniques and ability to retrieve information and to compare or evaluate information obtained from different e-database sources respectively. The result is evident that usage is enhanced where knowledge levels are high and training is provided.

A survey by Gathoni (2011), on monitoring and evaluation of electronic resources in academic and research institutions in Kenya highlighted that the majority of the respondents who were trained, indicated that training had enhanced their access and retrieval skills, were thus able to do with much ease. According to Brown, Lund and Walton (2007), on the use of electronic journals by academic staff and researchers at Loughborough University, there was modest need for training in managing electronic journals references and locating full text from references. However, a study of online searching of scientific information in science and technology libraries of Delhi reveals a sizeable number of users (almost 60%) are facing numerous problems while browsing electronic information, such as lack of knowledge about the resources, lack of trained staff and inadequate terminals (Ali , 2005).

The findings of this study also revealed that the academic staff possessed a moderate level of skills that can afford them opportunities to use available ICT facilities available in their institutions. Also the findings are in agreement with the findings of   Mostert and Olorunfemi (2013); Ajuwon and Popoola (2015) and; Obuh (2009) who concluded that in order to effectively utilise the growing range of electronic information resources, users must acquire and practice skills necessary to explore them. These skills include knowledge of structures of electronic information resources and instructions which must be put into search engine as well as ways in which instructions are linked with one another.

However, the result of this study is at variance with Ahmad and Panda (2013), they conducted a survey on the use of digital resources by the faculty members of Indian institutes in Dubai International Academic City (DIAC). Thirty faculty members representing ten from each of

the institutes studied were selected. The overall result of the study indicated that the use of digital library resources in the institutes studied was reasonably high. The study confirmed that lack of knowledge and use of digital libraries specific resources and concluded that the resources could still be better put into use among the faculty members. Ansari and Zuberi (2010) also explored the University of Karachi's faculty's use of digital library resources and reported that electronic resources were used for research and for preparation of lesson notes among lectures. Their findings also indicated that a majority of the academics have computer skills that facilitate the use of digital libraries, although a majority of them have little knowledge of these resources, which is not a positive aspect of the findings. Lack of knowledge and absence of facilities were also reported as the main reasons for not using electronic resources.

Conclusion

The study therefore submitted that academic staff in private universities in Nigeria have good knowledge and made use of electronic databases to obtain information materials for building of their lesson notes for teaching, research as well as to cope with fast-paced nature of innovations. The observed correlation between knowledge of electronic databases readily affirms the general perception by the academic staff that knowledge of electronic databases will have a positive effect on research productivity.

Recommendations

There is need for increased Internet access and bandwidth at various faculties and lecturers' offices in order to foster the use of electronic databases in their comfort zones. These inadequacies were observed in some private universities visited and their academic staff equally commented on them.

Specific training/re-training or user education of academic staff on the acquisition of ICT skills, awareness, access and use of e-databases should be organised regularly by relevant units such as university libraries or ICT centres.

References

Abdullahi, Z. M.,& Haruna, I. (2008). Utilization of information and communication
        technology (ICT) for information service delivery in university libraries in Adamawa

State. *The Information Scientist: An International Journal of Information and Communication Technology* (ICT), Vol. 5 No. 2, 26-27

Adeleke, I. T., Erinle, S. A., Ndana, A. M., Anamah, T. C., Ogundele, O. A., & Aliyu, D. (2014). Health information technology in Nigeria: Stakeholders' perspectives of nationwide implementations and meaningful use of the emerging technology in the most populous black nation. American Journal of Health Research, 3(1-1), 17-24.Adeniji, M. A. 2014. Availability and Utilization of Electronic Resources by Lecturers of Ibogun campus of the Olabisi Onabanjo University Ogun State, Nigeria. *Journal of Education Research and Behavioural Sciences*, 3.7: 195-200

Adeogun, Magaret. (2003). The digital divide and university education systems in sub-Saharan Africa. *African Journal of Library, Archival & Information Science.* 13. 1; 11-20.

Ahmad , M. and Panda, K.C. (2013). Awareness and use of electronic information resources by the faculty members of Indian institutes in Dubai international academic city (DIAC): A survey. *International Research Journal of Computer Science and Information Systems (IRJCSIS),* 2.1: 8-17,

Ajuwon, G.A., & Popoola, S.O. (2015). Influence of motivational factors on utilization of Internet health information resources by resident doctors in Nigeria. The Electronic Library,33(1), 103-119.

Ali, N. (2005). The Use of Electronic Resources at IIT Delhi Library; a study of search behaviours. The Electronic Library Vol.23 no. 6: 691 - 700

Arunachalam, S. (2003). Information for research in developing countries – information technology, a friend or foe. The International Information & Library Review, 35(24), p. 133 – 147.

Ansari, M. N. & Zuberi, B. A, (2010). Use of Electronic Resources among Academics at the University of Karach. Library Philosophy and Practice (e-journal). 385.http://digitalcommons.unl.edu/libphilprac/385

Brown, J., Lund, P. and Walton, G. (2007). Use of e-journals by academic staff and researchers at Loughborough University , Loughborough University Library, http://www.lboro.ac.uk/library/about/PDFs/ejournal_survey.pdf [Accessed 15th March 2015]

Day, J., (1998). Student Attitudes towards Electronic Information Usage *"Journal of Information Research"* Vol. 4 No.2 http://www.shot.ac.ukIs/publications/intres/paper54(html) accessed on 23rd April2014

Gathoni, N. et.al. (2011). Monitoring and evaluation of electronic resources in academic and research institutions in Kenya: a summary report. INASP [online], Available at:

<http://www.inasp.info/file/145da69d42e89201b2a1280c64ca0571/me-of-e-resourcesin-kenya.html>[accessed 18th January 2015].

Harle, J. (2010). *Growing knowledge: access to research in east and southern African universities*. London: The Association of Commonwealth Universities. Retrieved March 4, 2015, from https://www.acu.ac.uk/focus-areas/arcadia-acu-spotlight.

Ibrahim, A.E., 2004. Use and user perception of electronic resources in the United Arab Emirate University (UAEU). Libri, 54 :18 – 29.

Iqbal, M. Z., and Mahmood, A. (2011). Factors related to low research productivity at higher education level. *Asian social science*, 7(2), 188**.**

Jauch, Gupta Rajeev, William F. Glueck, (2010) Business Policy &. Business Policy: Strategy Formation

and Management. Action. New York: McGrawHill, 1976

Nwokedi, V. C. (2011). Nigerian University academics and institutional repository: A case study of University of Jos, Faculty of Natural Sciences Lecturers. An International Journal of Information and Communication Technology (ICT). 7.2:137 – 146.

Okonedo, S., Popoola, S.O., Emmanuel, S.O. & Bamigboye, O.B. (2015). Correlational Analysis of Demographic Factors, Self-Concept and Research Productivity of Librarians in Public Universities in South-west, Nigeria. International Journal of Library Science, 4 (3), 43-52. DOI: 10.5923/j.library.20160403.01

Ochai, A. and Nedosa, P.S. (1998). Publications output of librarians: the search for alternative justification. *African Journal of library, Archives and Information Science* 8.2:89-96.

Saka, Katamba Abubakar and Abdulrahman, Abdulrazaq Baba. (2008) Use of computer among library staff in four universities of technology libraries in Northern Nigeria. The Information Scientist: *An International Journal of Information and Communication Technology (ICT)*. 5.2:60

Sangowusi, F.O. (2003). Problems of accessing scholarly publications by Nigerian scientists: a study of the University of Ibadan. Journal of Information Science, 29 (2), 127-134.

Smith, K. H., Tobia, R. C., Plutchak, T. S., Howell, L. M., Pfeiffer, S. J., & Fitts, M. S. (2006). Copyright knowledge of faculty at two academic health science campuses: Results of a survey. Serials Review, 32(2), 59-67.

Olorunfemi, D. Y., & Mostert, B. J. (2013). The Information Seeking Behaviour of Law Students at Adekunle Ajasin University, Nigeria. In European Conference on Information Literacy pp. 542-549. Springer, Cham.

Obuh, A. O. (2009). Use of electronic resources by postgraduate students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria. Library Philosophy and Practice (e-journal), 301.