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INFLUENCE OF INFORMATION SEARCHING SKILLS AND USE OF ONLINE DATABASES ON RESEARCH OUTPUT OF POST GRADUATE STUDENTS IN UNIVERSITIES IN SOUTH WEST, NIGERIA

KAREEM, Abdulraheem Onivehu [1], Dr. A. O. Ahmed[2] and Wilson Oserada[3]
Onivehu2015@gmail.com[1] ganiyokahmed@yahoo.com[2] oserada.wilson@nsuk.edu.ng[3]
[1, 2] Library and Information Technology Department.
Federal University of Technology, Minna
[3] University Library, Nasarawa State University, Keffi

Abstract
This study investigated the influence of Information Searching Skills and the Use of Online Database on Research Output of Postgraduate Students in Universities in South-West, Nigeria. The study is guide by 3 objectives and three corresponding research questions. Survey research design was adopted for the study. The target population of the study was 28,454 postgraduate students in two universities in South West Nigeria. The sample size of the population was 752 using Krejcie and Morgan (1970) sample size table for determining the sample size of a population. Questionnaire was the only instrument used for data collection. Descriptive statistical tools (frequency counts, mean and standard deviation) were used to analyse the data. The findings of the study indicated that postgraduate students can access online databases from the university website. The study concluded that there would not be effective use of online databases for research output of postgraduate students in universities in South-West, Nigeria. The study recommended among others that postgraduate students should be exposed to more sensitization and training through seminar, symposium, and workshop which will impart knowledge and skills in accessing EIRs through the use of proper keywords and other information retrieval methods.
Keyword: Computer Self-Efficacy, Information Searching Skills, Online database, Postgraduate Students, Research Output, Self-efficacy

Introduction

Universities are major forces for the growth and development of individuals and the nation. They are vital and powerful drivers of global innovation and economic development structured toward a simultaneous achievement of excellence in learning, teaching and research activities for global development. Universities research undertakings cannot be overemphasized with a relevant spurring wheel for innovation and growth. Iroaganachi and Izuagbe (2019), as well as Khairuzzaman (2017) ascertained that through original research, Universities contribute to the development of research or academic disciplines, with its deliberate process and requirements for critical thinking skills. The student therein become better students and are best prepared for the challenges and opportunities of the future.

University system gradually has undergone transformative shift with the integration of digital technologies into disserve aspects: of research and education. Thus, the utilization of online database. The online database must always meet the information needs of researchers or students, otherwise it will not be seen as useful. Fortune (2014), (Anuoluwa & Airen, 2018) and Madhusudhan (2010) regarded online database as innovations of an epitome for everyday activities in the digital society. However, past studies have revealed low utilisation of online databases by postgraduate students (Nkoyo & Nsanta, 2016). This Alison, Kiyingi and Baziraake (2012) has attributed to be a human and institutional factors including information literacy or information searching skills. (Madhusudhan, 2010) (Hielmcrone, Maiello, Bainton & Bonnet, 2012).

It is necessary for educational institutions and researchers to frequently engage in literacy education in the course of training students. Post graduate students in particular should be giving high priorities in acquiring information searching skill. This will strengthen access and utilization of online database. According to Murugan (2013), user education enable them to be independent and sophisticated users of the library and its resources. User education bordered across the usage of online databases or library users' sensitivity, ability to use facilities or information resources within the library and or online.

Objectives of the Study

The main objective of the study is to investigate below specific objectives:

1. The influence of information searching skills and the use of online databases on research output of postgraduate students in Universities South West Nigeria
2. The purpose(s) of use of online databases by postgraduate students for their research output by the PG students in Universities South West Nigeria.
3. The degree of use of online databases by postgraduate students for their research output by the PG students in Universities South West Nigeria.

Statement of the Problem

The proliferation of Information and Communication Technologies has significantly evolved and revolutionized the existence, packaging of information resource especially on the Internet. However, despite the existence and enormous benefits offered by online databases to postgraduate students, findings from previous studies have revealed its low utilization. This setback could be attributed to computer self-efficacy and inadequate Information searching skills on use of the online databases. This therefore call for an urgent need to develop, boost and realign the computer self-efficacy and information searching skills of post graduate students so as to improve their literacy competencies for information retrieval; geared towards achieving meaningful research output for the progress of the individual, the university and the society.

It is against this background that this study is set out to investigate the influence of information searching skills and the use of online databases on research output of post graduate students in universities in South West, Nigeria.

Literature Review

Information Searching Skill

Information searching refers to purposive behaviour involving users' interactions with either manual or computer-based information systems in order to satisfy their information goals, information-searching refers to the micro level of behaviour when interacting with different types of information systems (Xie, 2019) and (Unagha, 2014). To use the available electronic information resources, Sahabi, Alegbeleye and Madukoma (2019) emphasized that students must acquire and use the skills to explore them (Kumar and Vohra, 2013).

Flavian-Blanco, Gurrea-Sarasa and Orus-Sanclemente (2011) posited that searching for information is more than mastering a set of techniques or following certain rules or principles to achieve desired outcomes. The American Library Association (2013) noted that information literacy is a set of capabilities enabling users to "identify at what time information is needed and have the skill to evaluate, locate and use efficiently the necessary information". According to Armen, Marlen, Alexandra, Vladimir, Elena, Alexey, and George (2016), several aggregators of information and database vendors, such as EBSCOhost and ProQuest, make way for advanced searches supported by specialist keyword thesauri.

The main principle of comprehensive searches is to avoid relying on any single, even highly reputable bibliographic database (Niel, Boyrie and Virieux. 2015, Ellegaard and Wallin. 2013) (Gasparyan, 2015). Another largest multidisciplinary platform, the Google Scholar is frequently adopted for pioneering searches by most authors, especially navigating to full-texts of journal articles and grey literature as explained by (Haddaway, Collins, Coughlin and Kirk 2015, Shariff, Bejaimal, Sontrop, Iansavichus, Haynes, Weir and Garg. 2013, Jamali and Nabavi. 2015). Eserada, Okolo and Ideh. (2019) opined that the guidelines are not intended to address the question of the ideal types of searching that should be provided in OPACs.

Online Databases

Online databases are examples of electronic resources or information that are frequently accessed by students. Others include: Internet, CD-ROM databases, Online Public Access Catalogue (OPAC), electronic journals, electronic books and digitized documents. The development of Information Communication Technologies (ICT), electronic information resources have come to be generally used and accepted by scholars and have improved greatly in volume over the places in the world (Oyedapo and Ojo, 2013). Research by (Liu and Luo, 2011), Aramide and Bello, (2010) and Omotayo (2010) highlighted some examples of online databases/electronic databases available to include HINARI, EBSCOHOST, Journal Storage (JSTOR), Science Direct, OARE, MIT Open Courseware, and OPAC.

According to Benjamin (2016), Fabunmi and Asubiojo (2013), Adigun, Onihunwa, Irunokhai, Sada and Adesina, (2011) an OPAC is the modern and flexible form of the catalogue, often providing instantaneous and sophisticated access to any recorded information within a computer. Thanuskodi (2012) noted that an OPAC database records are usually derived from MARC (machine-readable catalogue) format. The records are brief bibliographic descriptions enriched with a small number of controlled subject descriptors (often taken from the Library of Congress Subject Headings) and a classification number.

Use/ Utilisation of Online Databases

The study, use and impact of e-resources in University of Lagos by Egberongbe (2011) showed that the uses of e-resources are very common among the lecturers and research scholars of University of Lagos, but Isah (2010), Ani and Edem (2012), Akpojotor (2017) in their studies on the use of e-resources by academic staff of university of Ilorin found that, all academic staffs are aware of the existence of electronic library and e-resources in the University. The findings (Alkali and Gama, 2016) revealed that EBSCOhost, Nigerian Virtual Library, Sciencedirect, Jstor, Oareetc, databases were used by the academics.

Purpose of Online Databases Use

Online database has been a major information resources used by students in university for their research work. Sadiku and Kpakiko (2017) revealed that the e-resources mostly used by the respondents in universities in Nigeria in their results were: full-text databases, e-journals and online discussion group appeals more to the students. Sahabi, Alegbeleye and Madukoma (2019) and Kumar (2011) posited that electronic information resources that are frequently accessed by students include: Internet, CD-ROM databases, online databases, online public access catalogue (OPAC), electronic journals, electronic books and digitized documents.

The findings of Rakesh and Anil (2015), Olasore and Adekunmisi (2015) and Blewitt (2015) showed that adequate utilization of EIRs by academic staff in universities impacts the efficiency and effectiveness of their academic and research endeavors. However, Aramide and Bolarinwa (2010), Ayeni, Shorunke and Akinola (2014) as well as Okoye and Ugwuanyi (2012) who individually found that ease of access was a dominant consideration for EIRs acceptance and use among researcher.

Postgraduate

Postgraduate is defined as a course of study or an academic programme that occurs after an undergraduate degree has already been obtained. It is connected with further studies that someone does at a university after receiving their first degree (Eze, Nwakanma and Obidile, 2020). Coursework master's usually take one year's full-time study to complete after which you get awarded a Master's degree (MA, MSc, MEng, etc.) based on your subject of study (Osaheni, Onyenania and Momoh2017). However, research master's degrees could also be called an M.A. or M.Sc., similar to coursework masters, or with an appellation, e.g. M.Phil.

Methodology

The study adopted descriptive survey research design with a total population of 28,454 postgraduate students in universities in South-West, Nigeria. The sample size of the population was 752 drawn from Krejcie and Morgan (1970) sample size table for determining the sample size of a population. The instrument was self-administered questionnaires. Data was organized and analysed using frequency counts, mean and standard deviation. Explain how decisions were reached (decision rule (criterion mean) or real limit of numbers. Whichever one you choose, let it reflect in the tale interpretations).

Results

Response Rate

The respondents were asked to indicate their demographic variables and Table 1 and 2 shows the responses based on name of university, copies of Administered questionnaire, Number of returned questionnaire and postgraduate degree in view.

Table 1: Give table title

S/N	Name of Federal University	Copies of Administered Questionnaire	No. of Returned Questionnaire	Percentage(s) (%)
1	University of Ibadan	377	330	88
2	University of Lagos	375	353	94
	Total	**752**	**683**	**91**

Table 2:

Postgraduate Degree in View	Frequency	Percentage(s)
Ph.D	163	24
Msc/M.Eng./Med.	307	45
PGD	213	31
Total	**683**	**100**

Table 3: Influence of Information Searching Skills on Research Output of Postgraduate Students

S/N	Information Searching Skills of Postgraduate Students	VH	H	L	VL	NA	n	FX	$\bar{x}$	SD	Decision
		5	**4**	**3**	**2**	**1**	**683**				
1	I can easily access E-books for my research activities output	239	271	55	51	67	683	2613	3.82	0.82	High
2	I access E-journals with necessary information for my research output	204	236	109	95	39	683	2520	3.69	0.69	High
3	I use Institutional repositories as information sources for my research output	91	82	294	149	67	683	2030	2.97	0.03	Low
4	I am capable of using Internet sources for my research output	231	274	100	65	13	683	2694	3.94	0.94	High
5	I use Online Public Access Catalogue (OPAC) for my academic output	73	88	234	280	8	683	1987	2.91	0.09	Low
6	I know how to access reference management software such as Zotero, Mendely, & Refworks.	61	66	276	107	173	683	1784	2.61	0.39	Low

Key: VH- Very High, VL- Very Low, H- High, L-Low, NA- Not Available
Format table 3-5 in APA format as you did tables 1 and 2 (remove all vertical lines and leave only 3 horizontal lines).

Table 3 showed that, access to E-books for research activities output, access E-journals with necessary information for my research output and capability of using Internet sources for research output has the highest level of information searching skills among postgraduate students in the study area State the mean for each item presented.

Table 4: Purposes for which Online Databases are used by Postgraduate Students

S/N	Purpose for which Online Databases are Used by Postgraduate Students	SA	A	D	SD	UN	n	FX	$\bar{x}$	SD	Decision
		5	**4**	**3**	**2**	**1**	**683**				
1	Online research databases system saves me time.	79	198	271	129	6	683	2264	3.31	0.31	Agreed
2	Online research databases enhance my knowledge and research skills.	198	277	103	100	5	683	2612	3.82	0.82	Agreed
3	Online databases provide me with the current information on particular areas of research.	234	292	71	55	31	683	2692	3.94	0.94	Agreed
4	Online databases improve the quality of my research work.	237	251	98	90	7	683	2670	3.91	0.91	Agreed
5	Online databases help me with an insight as regard writing my thesis/journal articles.	294	236	82	58	13	683	2789	4.08	1.08	Agreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD) Undecided (UN)

Table 4 showed that postgraduate students in the study area used mostly online databases as an insight as regarding writing of their thesis/journal articles, enhance their knowledge and research skills , improves the quality of their research work, provide them with the current information on particular areas of research and helps with insight as regard writing my thesis/journal articles.

Table 5: Degree of Use of Online Databases

S/N	Degree of Use of Online Databases	VHD	HD	LD	VLD	NA	N	FX	$\bar{x}$	SD	Decision
		5	**4**	**3**	**2**	**1**	**683**				
1	I use AGORA for my research work	79	198	271	129	6	683	2264	3.31	0.31	High
2	I use JSTOR database for my research work	61	107	234	221	60	683	1937	2.83	0.17	Low
3	I search the Internet for my research activities	198	277	103	100	5	683	2612	3.82	0.82	High
4	I use E-books than other online databases	277	112	200	68	26	683	2595	3.79	0.79	High
5	I search through E-journal for my research work	208	217	145	97	16	683	2553	3.74	0.74	High
6	I use EBSCOhost more for my research work	61	66	276	107	173	683	1784	2.61	0.39	Low
7	I search through HINARI for my research work	73	88	234	280	8	683	1987	2.91	0.09	Low
8	I use Science Direct online database for my research work	91	194	249	85	64	683	2212	3.24	0.24	High
9	I search ProQuest, AJOL, Pub Med Central for information resources	91	82	294	149	67	683	2030	2.97	0.03	Low

Key: High Degree (HD) –Very High Degree (VHD) -Low Degree (LD) –Very Low Degree (VL) - Not At All (NA), Standard Deviation (SD), mean ($\bar{x}$). Table 5 shows that Science Direct, E-journal, Internet, E-books, and AGORA are the most used online databases by postgraduate students for their research output as they all has a high mean responses from the respondents.

Discussion

The findings from research objective 1 revealed that postgraduate influence of information searching skills and the use of online databases on research output of PG students is on the average. This is in line with Najm, Rehman and Mahmood, (2018) that information searching skills improves the effective use of information resources, ability to identify when information is needed, and ability to evaluate and synthesizes information sources in order to become independent life-long learners.

The study from objective two revealed that the purpose of using online databases by postgraduate students are: theses writing, assignment, term papers, provides current information, saves their time, improves the quality of their research work and gives insight on

writing of theses/journal articles . This agrees with the findings of Razeghi (2019) that research activities involve specialized forums which leads to the production of academic writings that involves projects, thesis and dissertations, seminar papers, scientific seminar, book review sessions, conferences and workshop which is of a great benefit to researcher's educational attainment.

The analysis from research objective three showed that the degree of use of online databases is only used more when needed by the postgraduate students and that they use some more than the others. The findings show that online databases such as AGORA, Science Direct, Internet, e-books and e-journals are used frequently with high responses. However, the use of JSTOR database, EBSCOhost, HINARI, ProQuest, AJOL and PubMed central as online databases were rated low in terms of usage among postgraduate students studied.

Summary of Findings

Based on the result of the analysis, the following are the summary of findings:

1. The influence of information searching skills and the use of online databases on research output of postgraduate students is moderate.
2. The purpose(s) of use of online databases by postgraduate students for their research output are writing of theses, assignment, term papers, provides current information, quality of research work.
3. The degree of use of online databases by postgraduate students is seldomly use and also based on the database.

Conclusion

The study revealed that postgraduate students possess information searching skills on the ability to access e-books for their research activities, access e-journals with necessary information for their research and also possesses the capability in using Internet sources for their theses, assignment, and term papers, provides current information, quality of research work.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. The managements of universities in South West Nigeria should inculcate in the student academic curriculum learning on several searching skills so as to easy the student online database searches.
2. The managements of universities in South-West, Nigeria should encourage postgraduate students on their information literacy skills by introducing search strategies using Boolean logic and keywords and also enlighten them through workshops and seminars on how to use online databases for their research output.
3. Managements of universities in South West Nigeria should support, encourage all postgraduate students to own their personal computer systems (laptops) which will enable them to have continual interactions with the system to develop a high computer self-efficacy and positive perceived usability which in turn would greatly enhance their research outputs.

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