



COMPUTER SELF-EFFICACY AND INFORMATION SEARCHING SKILLS ON THE USE OF ONLINE DATABASES FOR RESEARCH OUTPUT OF POSTGRADUATE STUDENTS IN UNIVERSITIES IN SOUTH-WEST, NIGERIA.

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Abstract:

This paper assessed Computer Self-Efficacy and Information Searching Skills on the Use of Online Databases for Research Output of Postgraduate Students in Universities in South-West, Nigeria. The study was guided by two objectives and two corresponding research questions. Survey research design method was adopted. The total population for the study was 28,454 postgraduate students in the universities studied. 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. Questionnaire was the only instrument used for data collection. Out of 752 copies of questionnaire administered, 683 copies were filled, returned and used for the analysis. Descriptive statistical tool involving frequency counts and percentages, 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, agreed with all the factors affecting computer self-efficacy and information searching skills on the use of online databases among postgraduate students with the exception of familiarity with task demand, expertness and credibility. The study recommended among others that postgraduate students should be exposed to more sensitisation and training through seminar, symposium, and workshop which will impart knowledge and skills in accessing EIRs through the use of proper keywords, information retrieval methods and technicality of various online databases available, challenges faced by the postgraduate students particularly in the area of epileptic and erratic power supply should be

addressed such as the use of a standby generator, inverter or solar energy system.

Keywords: *Computer self-efficacy, Information searching skills, Postgraduate students, Research output.*

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, academic environment structured toward a simultaneous achievement of excellence in learning, teaching and research activities for global development.

Through detailed research, university students develop critical thinking competencies that foster extraordinary advances to the social, political and economic demands of today. It is on this note that, research as a spurring wheel for innovation and growth of any institution, especially universities and the nation at large cannot be over emphasized. Connaway and Powell (2010), Khairuzzaman (2017), University of Skovde, 2016 defined research as a method of scientific enquiry by which, through careful and exhaustive investigation of all ascertainable evidences, bearing upon a definable problem, one can reach a solution to that problem., stated that, when the next generation of practitioners and leaders (students) engage in research, with its deliberate process and requirements for critical thinking skills, they become better students and are best prepared for the challenges and opportunities of the future.

Based on the foregoing, postgraduate students who are students, undertaking graduate studies after obtaining a first degree or its equivalent compulsorily engage in research activity as an integral part of their course unit. Unlike students at the undergraduate level, postgraduate students are often required to present class seminars on relevant course topics thereby, increasing their demand for the use of electronic resources or other information resources (Adeniran 2017). According to Anuoluwa and Airen (2018), postgraduate students form a significant group in the university. The success of their programmes largely depends on the educational resources made available by the university and through the library. An example of electronic resources is the

online database. There is no doubt therefore that postgraduate research affects a country's research output which in turn affects the community (Adeyimika et'al 2018).

Preparing effective research requires identifying an appropriate online platform with relevant databases. Fortune (2014), regarded online database as innovations of an epitome for everyday activities in the digital society. Hopefully in the nearest future, information as it is today, also in their billions will exclusively be online as a database for all the needed and required purposes. Currently, publishers/aggregators/vendors offer access to aggregated information resources in the form of online databases to libraries and other users through various subscription models, a trend that is rapidly replacing the print subscription models (Hielmcrone, Maiello, Bainton & Bonnet, 2012). Online databases are privy tools adding value to knowledge existences and collections. Past studies have revealed low utilisation of online databases by postgraduate students (Nkoyo and Nsanta, 2016). Alison, et'al (2012) found that utilization of e-resources was affected by human and institutional factors including information literacy, low bandwidth. As opined by Suresh and Ravi (2020) that access can be through the information literacy skills which can be acquired through user education. According to Murugan (2013), user education is the collection of instructions which equips library users with the skills which would enable them to be independent and sophisticated users of the library and its resources.

The computer self-efficacy skills are the strategies that must be learned, employed for effective access and utilization of online databases with a stellar research output. Schlebusch (2018) opined that Computer self-efficacy (CSE) is a term that originated from the wide-ranging concept of self-efficacy. Though, Alahakoon (2016) believes that, Self-efficacy does not measure the skills but it measures what individuals believe they can do with the skills they have. Users doesn't have to know everything about accessing online database but getting the awareness about the resources through users' education will gives them a better chance for its usage.

Statement of the Research Problem

The proliferation of Information and Communication Technologies has significantly evolved and revolutionized the existence, process, packaging of information resource especially on the Internet with several pace and

complexity of information resources in the form of an online databases, this increases on daily basis exponentially, ranging from thousand to millions of resources with greater benefits to students, researchers. The relevance of this online databases to postgraduate students especially cannot be overemphasized as it provides access to current, reliable, affordable information which can be accessed anywhere and at any time.

However, despite the existence and enormous benefits offer by online databases to postgraduate students, findings from previous studies have revealed low utilization of online databases by this group of students. 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 outmoded their literacy competencies for information retrieval; geared towards achieving meaningful research output for the progress of the individual, the university and the society.

Objectives of the study

The objectives of the study are to:

1. Find out the level of computer self-efficacy of postgraduate students on the use of online databases for research output of postgraduate students in universities in South West, Nigeria.
2. Examine the factors affecting computer self-efficacy, information searching skills, use of online databases on research output of postgraduate students.

Research Questions

The following research questions are postulated to guide the study:

1. What are the level of computer self-efficacy of postgraduate students on the use of online databases for research output of postgraduate students in universities in South West, Nigeria?
2. What are the factors affecting computer self-efficacy, information searching skills, use of online databases on research output of postgraduate students?

Literature Review

The use of digital technology has become an inseparable part of student's learning at all levels of education. Innovative technological tools, such as mobile/smart phones, TV and the Internet to mention but a few have given birth to new ways of e-learning to complement traditional ones. Computer self-efficacy provides the bases for postgraduate students' information searching skills which enable them have access to useful online databases for their research outputs.

It has been found in previous studies as a factor that influence information system's usage in individuals (John 2013, Ariff *et al.*, 2013, Benjamin *et al.*, 2016, Nur`ain, 2015). Computer self-efficacy plays a significant role in mediating the impact of anxiety on perceived ease of use of online database. Sahabi *et al* (2019) opined that since electronic resources depend on technology, there is need for computer self-efficacy. Olalekan and Stanley (2018) opined that integrating computers in higher education, researchers need to proposed that positive attitudes toward computers and high computer self-efficacy levels could be important factors in helping students learn computer skills and use computers.

Information searching can be used as synonymous term for information-seeking and information access. While information-seeking refers to purposive behavior involving users' interactions with either manual or computer-based information systems in order to satisfy their information goals (Xie, 2019). Online databases as an electronic information resources usage, requires information literacy skills. To use the available electronic information resources, Sahabi *et al* (2019) emphasized that students must acquire and use the skills to explore them; this will help students to effectively search and have access to needed information. OPAC for example offer vast capacities and capabilities foe searching like advanced search, keyword search, Boolean search and Truncation search as compared to the traditional card- based catalogue search options (Kumar and Vohra, 2013). 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".

Students with opportunity of using computer technology and have the chances to work in the computer labs had better chances for CSE in university as opposed students less motivated to use computer applications in their learning as a result of inadequate or non-availability of Computer lab (Abdullah and Mustafa, 2019., Wang, Xu, and Chan, 2015). Abdullahi and Mustafa (2019) further affirmed that students' nature of study, which is more technology-based will provides an increase in their CSE with a huge correlation to their academic achievement. Abdullahi and Hassan (2011) also revealed that self-efficacy could only promote student achievement via student interactions in an e-learning environment. Other factors which affect CSE are students' class size, an enhanced understanding of the area which could lead to practical benefits if it is technology-based, rather than their beliefs in their capability to use computers in their learning (Sheldrake, 2016).

The study by Desta, Preez and Ngulube (2017) revealed that contextual and personal factors which gave rise to the student's information needs and in turn prompted information activities such as information seeking in university are lack of ICT infrastructure, frequent interruptions in electricity supply, old computers and Library locations proved to be the main factors affecting postgraduate students' electronic information-seeking behavior.

Methodology

The study adopted survey research design method. This is because survey research design method has the advantage of wider application as it allows data to be collected on a large population. The survey research design is relevant for this study because it is relatively cheap and serve as a fast way of collecting information and data on the computer self-efficacy and information searching skills for research output of postgraduate students. Structured questionnaire was the only instrument used for data collection.

Data Analysis and Discussion

Table 1: Level of Computer Self-Efficacy of Postgraduate Students

S/N	Statements	VH	H	L	VL	NA	n	FX	\bar{x}	STD	Decision
		5	4	3	2	1	683				
1	I am able to use the online research databases	186	261	134	69	33	683	2547	3.37	0.73	High
2	I can navigate my way through the online databases	100	277	174	74	58	683	2336	3.42	0.42	High

3	I can download research materials from the online databases	193	321	84	58	27	683	2644	3.87	0.87	High
4	I seem to have difficulties with most of the computer packages I have tried to use	106	369	67	71	70	683	2419	3.54	0.54	High
5	I can access the online databases from the university website.	199	201	107	100	76	683	2396	3.51	0.51	High
6	I have the ability to e-mail journals/articles publishers from online databases.	86	94	297	145	61	683	2048	2.99	0.01	Low
7	I have the knowledge and skills required to benefit from using the online research database	277	112	200	68	26	683	2595	3.79	0.79	Low
8	I can save and print journals/articles from the online databases	208	213	137	116	9	683	2544	3.72	0.72	High
9	I often have difficulties when trying to learn how to use a computer Package	246	257	57	40	83	683	2592	3.79	0.79	High
10	At times, I find working with computers very confusing	109	139	207	201	27	683	2151	3.15	0.15	High
11	As far as computers go, I don't consider myself to be very competent	208	217	145	97	16	683	2553	3.74	0.74	High
12	I find working with the computer very frustrating	113	118	209	146	97	683	2053	3.01	0.01	High

Key: High (H) –Very High (VH) -Low (L) –Very Low (VL) - NA (Not at all)

The result from Table 1 showed that twelve items were listed for postgraduate students to respond on the level of their computer self-efficacy. Eleven items produced high mean scores which were above the benchmark mean of 3.00. These items include item 3: I can download research materials from the online databases (\bar{x} =3.87; SD =0.87), item 7: I have the knowledge and skills required to benefit from using the online research database (\bar{x} =3.79; SD =0.79), item 9: I

often have difficulties when trying to learn how to use a computer package ($\bar{x}=3.79$; $SD=0.79$), item 11: As far as computers go, I don't consider myself to be very competent ($\bar{x}=3.74$; $SD=0.74$), item 1: I am able to use the online research databases ($\bar{x}=3.73$; $SD=0.73$), item 8: I can save and print journals/articles from the online databases ($\bar{x}=3.72$; $SD=0.72$), item 4: I seem to have difficulties with most of the computer packages I have tried to use ($\bar{x}=3.54$; $SD=0.54$), item 5: I can access the online databases from the university website ($\bar{x}=3.51$; $SD=0.51$), item 2: I can navigate my way through the online databases ($\bar{x}=3.42$; $SD=0.42$), item 10: At times, I find working with computers very confusing ($\bar{x}=3.15$; $SD=0.15$), and item 12: I find working with the computer very frustrating ($\bar{x}=3.01$; $SD=0.01$). on the other hand, one item produced low mean score below the benchmark mark of 3.00 which is item 6: I have the ability to e-mail journals/articles publishers from online databases ($\bar{x}=2.99$; $SD=0.01$).

Table 4.9: Factors Affecting Computer Self-Efficacy and Information Literacy Skills on Research Output of Postgraduate Students.

S/N	Statements	SA	A	D	SD	UN	n	FX	\bar{x}	STD	Decision
		5	4	3	2	1	683				
1	Irregular power supply	211	216	100	84	72	683	2459	3.60	0.60	Agreed
2	Unsteady access to the web	184	273	113	97	16	683	2561	3.75	0.75	Agreed
3	High cost of subscription fee for some materials	210	257	116	91	9	683	2617	3.83	0.83	Agreed
4	Inadequate awareness on the availability of online databases	207	225	180	68	3	683	2614	3.82	0.82	Agreed
5	Poor computer operating skills level	219	248	94	86	36	683	2577	3.77	0.77	Agreed
6	Inadequate techniques to	231	257	180	13	2	683	2751	4.02	1.02	Agreed

	retrieve most relevant information										
7	Inability to use the computer for long period	191	211	200	66	15	683	2546	3.73	0.73	Agreed
8	Slow Servers/Internet connectivity	218	294	98	70	3	683	2507	3.67	0.67	Agreed
9	Suspicious websites/pages on the Internet	168	234	81	200	11	683	2430	3.56	0.56	Agreed
10	Familiarity with task demands	66	73	276	255	13	683	1973	2.89	0.11	Disagreed
11	Perceived task difficulty	208	217	145	97	16	683	2553	3.74	0.74	Agreed
12	Expertness and Credibility	91	82	294	149	67	683	2030	2.97	0.03	Disagreed

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

The result from Table 4.9 revealed that twelve items were listed for postgraduate students to respond on the factors affecting their computer self-efficacy and information literacy skills on their research output. Ten items produced high mean scores which were above the benchmark of 3.00. These items include item 6: Inadequate techniques to retrieve most relevant information ($\bar{x}=34.02$; $SD=1.02$), item 3: High cost of subscription fee for some materials ($\bar{x}=3.83$; $SD=0.83$), item 4: Inadequate awareness on the availability of online databases ($\bar{x}=3.82$; $SD=0.82$), item 5: Poor computer operating skills level ($\bar{x}=3.77$; $SD=0.77$), item 2: Unsteady access to the web ($\bar{x}=3.75$; $SD=0.75$), item 11: Perceived task difficulty ($\bar{x}=3.74$; $SD=0.74$), item 7: Inability to use the computer for long period ($\bar{x}=3.73$; $SD=0.73$), item 8: Slow Servers/Internet connectivity ($\bar{x}=3.67$; $SD=0.67$), item 1: Irregular power supply ($\bar{x}=3.60$; $SD=0.60$) and item 9: Suspicious websites/pages on the Internet ($\bar{x}=3.56$; $SD=0.56$). On the other hand, two item produced low mean scores below the benchmark mean of 3.00. These items include item 12: Expertness

and Credibility (\bar{x} =2.97; SD=0.03) and item 10: Familiarity with task demands (\bar{x} =2.89; SD=0.11).

Discussion of the Findings

The findings of the study revealed that the level of computer self-efficacy possessed by postgraduate students is moderate. The computer self-efficacy of postgraduate students was mainly the ability to save and print journal/articles from the online databases, use research databases, ability to navigate through online databases, download research materials and access online databases from the university website. However, the level of computer self-efficacy such as the ability to e-mail journal/article publishers from online databases, difficulties in trying to use a computer package, often find working with computers very confusing and having difficulty with most of the computer packages they have tried to use were low among the respondents.

The study equally revealed that the respondents indicated that irregular power supply, unsteady access to the web, high cost of subscription fee for some materials, inadequate awareness on the availability of online databases, poor operating computer skills level, inadequate techniques to retrieve most relevant information, inability to use the computer for a long period, slow servers/Internet connectivity, suspicious website/pages on the Internet and perceived text difficulty were seen as factors affecting computer self-efficacy and information searching skills on the use of online database among postgraduate students in the studies areas. This indicated that the use of online database is negatively affected. This is in line with the findings of *Kwafoa et al.* (2014) that the low usage of online databases is attributed to the lack of access to scholarly databases, which emanates from slow Internet speed, high cost of Internet use and frequent power cuts. Similarly, Bhatt and Rana (2011) corroborates this in their finding that the most common problems with e-resources are low speed Internet connectivity, technical problems such as electricity problems, unavailability of sufficient e-resources and high purchase price of electronic databases. As such, urgent attention needs to be given on the provision of more Internet bandwidth, alternative power supply, fund and user education programme by creating awareness on the availability of online

databases and how they can be used to support research activities of postgraduate students.

Conclusion

The study presented a survey on the computer self-efficacy and information searching skills for research output of post graduate students in university in South-West, Nigeria. The study revealed that postgraduate students possessed 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 possess the capability in using Internet sources for their research. However factors such as irregular power supply, unsteady access to the web, high cost of subscription fee for some materials, inadequate awareness on the availability of online databases, poor operating computer skills level, inadequate techniques to retrieve most relevant information, inability to use the computer for a long period, slow servers/Internet connectivity, suspicious website/pages on the Internet and perceived text difficulty were seen as factors affecting computer self-efficacy and information searching skills on the use of online database among postgraduate students in the studies areas. With all these, there would not be effective use of online databases for research output of postgraduate students in universities in South-West, Nigeria.

Based on these findings, this study offers the following recommendations:

1. Postgraduate students should be exposed to more sensitisation 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 and technicality of various online databases available.
2. The management of universities in South-West, Nigeria should properly address the challenges faced by the postgraduate students particularly in the area of epileptic and erratic power supply. This can be made possible by finding an alternative way to generate power supply such as a standby generator, inverter or solar energy system in the libraries.

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