

Influence of Postgraduate Students Computer Self-Efficacy on the Use of E-Book and E-Journal for Research in Universities in Benue State, Nigeria

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Abstract: This study investigated Perceived influence of Postgraduate Students Computer Self-efficacy on the use of e-book and e-journal for Research in Universities in Benue State Nigeria. Two specific objectives with corresponding research questions guided the study and Two hypotheses formulated and tested at 0.5 level significance using Chi-square test of goodness of fit (χ^2). Descriptive survey design was adopted. A population of 3821 registered postgraduate students in the three university libraries with the sample size is 362 registered were employed for the study. The instrument for data collection was self-structured questionnaire title "(PICSEBJRRPGSQ) with 10 (ten) items questionnaire used to elicited information from respondents. The instrument was validated by three experts and to ensure internal consistency of the instrument, it was trial tested on 35 postgraduate students of Federal University of Technology Minna Niger State which are not part of the study but possessed a similar characteristics. Two research assistants were used for the study. Data collected were analysed using Descriptive statistics of Mean and Standard Deviation to answer the research questions of the study. The following findings were revealed: Postgraduate students' computer self-efficacy influences their use of e-book and e-journal for research in universities in Benue state. The study therefore recommended that, university management should organize periodic seminars for postgraduate students to enlighten them more about their computer self-efficacy and its influence on electronic information resources as it increases and facilitate research production in universities.

Keywords: Computer Self-efficacy, e-book, e-journal, Postgraduate students, Research, universities.

1.0 INTRODUCTION

Information resources are vital tools in every university library. The success of any library depends on its resources and the utilization of its resources (Nwosu & Opara, 2019). Thus, for any university library to function effectively there must be a well-equipped library with relevant and up to date information resources to meet the needs of library users. Information resources exist in several formats such as print and electronic formats. However, the advent of information and communication technology (ICT) in the 21st century, has radically changes the way libraries provide information resources. This advancement created a shift from traditional information resources in print form to digital resources and has affected all aspect of information handling and management as information is being produced more electronically (Gana, Ajibili & Dare, 2019). Significantly, Electronic information resources provide timely and easy access to information in electronic format. Electronic information resources such as electronic journals are publications issued in successive order that are available in electronic format. E-journals are global information highways that are added to library collections at exponential rates. Madondo, Sithole, and Chisita (2017), and Maxymuk (2014) acknowledges the advantages of electronic journals to include access to information that might be restricted to the postgraduate students due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related to content, no physical space required and accessibility from almost any workstation that can be connected remotely to an institution network.

E-journals are important information resource for global scholarly communication. They are vital academic resources available at any time to meet the research needs of postgraduate students. Despite this, easy accessibility of these EIRs for research productivity largely depend on computer self-efficacy of postgraduate students. Invariably, frequency use of e-information resources increases computer self-efficacy of postgraduate students in universities. A postgraduate computer self- efficacy toward an application can decline during periods of inactivity with that application. Singh and Bebi (2012) stated that ejournals play an important role in the research and development activities and undisputedly considered primary channels for effective dissemination. The advent of information communication technologies (ICTs) brought an amazing boost to the usage of electronic journals, and this marked the paradigm shift in scholarly communication. That is, from printed journals which was the principal medium of communication to electronic journals. As a result, universities worldwide now invest a lot on electronic information resources because it reduces the time between the production and utilization of knowledge; improves co-operation and exchange of ideas with fellow researchers in other institutions, regions, or countries, furthers the sharing of information; and promotes multidisciplinary research (Foo, 2012).

The emergence of electronic information resources has tremendously transformed information handling and management in academic environments in university libraries. With electronic resources, researchers, and students; now have access to global information resources, particularly the internet for their scholarly intercourse. Access to electronic information resources offers opportunities to obtain accurate and timely literature. However, an observation by the researchers in the study area shows that, there is low usage of e-books and e-journals resources for research activities in university libraries. Could this be due to lack of computer Self-efficacy among postgraduate students? It is against this that, the researchers are set to investigate influence of postgraduate students' computer Self-efficacy on the use of e-book and e-journal for research in universities in Benue State.

The objective of this study is to investigate the perceived influence of postgraduate students computer self-efficacy on the use of e-book and e-journal resources for research in universities in Benue State. The Specific objectives of the study were to:

- **1.** determine the influence of postgraduate students' computer self-efficacy on the use of e-books for research in universities in Benue State.
- **2.** examine the influence of postgraduate students' computer self-efficacy on the use of ejournals for research in universities in Benue State.

Research Questions

- 1. what influence does postgraduate students' computer self-efficacy have on the use of ebooks for research in universities in Benue State.
- 2. what influence does postgraduate students' computer self-efficacy have on the use of ejournals for research in universities in Benue State.

Hypotheses

The hypotheses formulated for the study were tested using Chi-square test of goodness of fit analysis at 0.05 level of significance.

- **1.** Postgraduate students' computer self-efficacy does not significantly influence the use of e-Books for research in universities in Benue State.
- 2. Postgraduate students' computer self-efficacy does not significantly influence their use of e-journals for research in universities in Benue State.

2.0 LITERATURE REVIEW

Conceptualization

Electronic information resources (EIR) are information materials in digital format that can only be accessed electronically using computer device or mobile device. IGI Global (2019) describes electronic information resources (EIRs) as electronic products and information materials that deliver a collection of data, be it text referring to full text databases, e-journals, ebooks, e-newspaper, image collections, theses, conference papers, government papers, scripts, and monographs in an electronic form. Anyim (2018) defined electronic information resources as information resources in which contents could be accessed using internet; CD-ROMs, electronic books (e-books), electronic journals (e-journal), electronic indexes, digital reference materials, online databases, and other e-collection. e-book is an electronic version of a traditional printed book that can be read with the use of a personal computer, android phones, or tablets by postgraduate students. An e-Book is a non-editable, reflow able book that is converted to a digital format to be read on any digital device such as computer screens or mobile devices. Electronic books, commonly known as e-books, are becoming popular they are current and have many advantages over hardcopy books. These advantages spread across different categories of users and providers, including readers, publishers, authors and libraries (Jeong, 2012). Electronic books are publications modelled on traditional publishing products, but they can be read in the form of computer files, transferred as digital files or downloaded over the internet on to desktop computers, laptops and other devices enabled to handle digital files. The importance of electronic information resources to postgraduates has forced them to learn how to access and

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use a wide variety of resources judiciously and skilful use of these resources as research and learning tool among them to be successful in their research task (Odede, 2018). With EIRs postgraduate students acquired self-efficacy which is the bedrock for human motivation that are necessary for personal accomplishment. It is an indispensable element on the use of electronic information resources, as technology is rapidly evolving; postgraduate students are expected to possess a high level of self-efficacy to function effectively in their studies and information society. Ren (2000) referred self-efficacy as a student's ability to feel confident in conducting electronic searches to retrieve relevant information and noted that a higher level of self-efficacy is required in the use of library database. According to Singh (2011), self- efficacy reflects an individual's confidence in his/her ability to perform the behaviour required to produce an outcome and its thought to directly impact the choice to engage in a task, as well as the effort that will be expanded and the persistence that will be exhibited. Contrary, an individual who possesses low self-efficacy is less expected to persevere doing challenging activities. Computer self-efficacy refers to a person's perception of his computing ability. Fundamentally, this suggests that a person's perception of his ability in carrying out certain tasks can very much depend on their past experiences with computer tasks. It is germane to know that computer self-efficacy is not a static concept; it is continually being actualized in an individual's mind, which Bandura theory (1977) refers to as "mastery experience". For example, given the right technical infrastructure, postgraduate students may value their interpersonal skills, maintain ICT competence by pursuing a goal to its logical conclusion. As a result, postgraduate students' computer self- efficacy in that area will surely contribute to positive their research productivity. A postgraduate student is a student studying for higher academic degree or professional, after successful completion of his/her first degree (Kenny, 2014). Postgraduate studies according involved learning and studying for academic or professional degrees, academic or professional certificates, academic or professional diplomas, or other qualifications for which a first or bachelor's degree generally is required, and it is normally considered to be part of higher education. Postgraduate student computer self-efficacy is explored in many studies on electronic information resources.

Empirically, the findings of Johnson (2011) indicated that a high level of self-efficacy plays an important role in academic achievement. Issa, Amusa and Daura (2009) reported that only 25% of postgraduate students use computers for searching education-related database, hence, the postgraduate students' ability to find and retrieve information effectively is a transferable skill useful for their future life as well as enabling the positive and successful use of the electronic information resources while at school. Also, according to Kolbe, (2009) recent studies have revealed that user behaviour, information skill and self-efficacy as elements on postgraduates' use of electronic information resources such as e-books, e-journal, online database, CD-ROM, online public access catalogue OPAC in federal universities in southern Nigeria. Biddy and Richard (2019) disclosed that, E-books have enthusiastically been adopted by academic libraries, viewed as a golden bullet by library professionals, resulting in efficient resource use, space saving, student satisfaction and accommodating millennial generation study habits. Ferguson (2016), Riha and LeMay (2016) and Frederick (2015) pointed out that, E-books provide 24/7 access to information, underpin distance and part-time learning modes, can meet high demand reading list access (if simultaneous multi-user access is available) and save on space compared to multiple print copies. Enis (2018) and Mizrachi (2015) findings reveal that, E-book usage was predominantly about convenience for many respondents, easily accessible anytime and anywhere. Similarly, Ronse (2017), reports that, e-books have now become a standard platform in providing reading materials for students most especially postgraduate students. Williams and Judd-Leonard (2014) examined the diffusion of e-books among postgraduate students in arts and technology faculties of the University of Ibadan, and advance that, Students use e-books mainly to cross-validate and gain extra insights about what they have been taught.

Similarly, Vasishta and Naviiyoti, (2011) revealed that, Libraries are doing extensive work to make e-journals available to their students and keeping them abreast with the latest developments in their field of interest. Chirra and Madhusudhan (2009), Aladeniyi, (2017) revealed that, the demand for electronic journals (e-journals) among the academic and research community like postgraduate students who need quality information for their thesis work has increased over the years, e-journals are fast gaining wider acceptability and usage as most researchers and scholars now made their research findings available through electronic journals. Anajoyce and Peter (2018) assessed the awareness of Programme for Enhancement of Resources Initiative (PERii) electronic journals, and reveal that, these resources are widely used, even for the exploration of ongoing scientific debates through peer reviewed papers. The researchers further maintain that PERii electronic journals are important and useful resources in supporting learning and research of the postgraduate students in higher learning institutions hence most of the postgraduate students have reported that these resources are very useful, and they access and use them. Azonobi and Uwaifo (2020) explored user behaviour and self-efficacy as elements to postgraduates' use of electronic information resources in Federal Universities in Southern Nigeria and reveals psychological factors such as trust on the information source and perceived usefulness, social factors like referral from course-mates and lecturers as the factors that influenced the use of electronic information resources like electronic journals such as African Journals Online (AJOL), electronic books, electronic theses and dissertation, electronic magazines and other electronic databases and high self-efficacy level increased the use of electronic information resources among the respondents. Theoretically, the study anchor on Self-Efficacy Theory propounded by Albert Bandura in 1977 which emphasized that, people beliefs in their capabilities to produce desired effects by their own actions. The most important determinants of the behaviours people choose to engage in and how much they persevere in their efforts in the face of obstacles and challenges.

3.0 METHODOLOGY

Descriptive survey design was adopted for the study. Descriptive survey design is a type of research in which a group of people is studied by collecting and analyzing data from opinions of a few people considered to be a representative sample of the entire population using questionnaire as one of the methods for data gathering techniques for the purpose of describing, interpreting and evaluating the phenomena as they exist (Emaikwu 2019). Benue state was the area of study with emphasis the four universities namely, Joseph Sarwuan Tarka University, Benue State University, University of Mkar, Mkar, and University of Health Sciences Otukpo. The population of the study was 3821 registered postgraduate students with the sample size of 362 respondents determined through Taro-Yamane formula for sample size determination for finite population. Muti-stage sampling procedure and a simple random sampling techniques was used for the selection process that gives each element in the population an equal chance of being included in the sample. The instrument for data collection was self-structured questionnaire with

25-items that elicited information based on the objectives of the study. The response options were very high influence (VHI), high influence (HI), low influence (LI) and very low influence (VLI) with the benchmark of 2.50 and above. A face-to-face method was employed in administering the questionnaire. Data was analyzed using mean and Standard. A mean score of 2.50 and above was considered as influence while less than 2.50 was rejected.

4.0 RESULTS AND DISCUSSION

Research Question 1: What is the perceived influence of postgraduate students' computer Self-efficacy on the use of e-Books in universities in Benue State?

Table 1: Mean and standard deviation analysis of respondents on perceived influence postgraduate students' computer self-efficacy on the use of e-Books in universities in Benue State.

		N=343							
S/N	Item Description	VHI	н	LI	VLI	Value	Ā	S. D	Remark.
1	Reading of books in the form of computer files	201	113	12	17	343	3.45	0.78	н
2	Transferring of books as digital files over the internet to desktop computers	148	155	20	20	343	3.26	0.81	HI
3	download of e-books as digital files on laptops computers	163	147	20	13	343	3.34	0.75	н
4	customizing onboard software using handheld devices	152	141	32	16	343	3.25	0.82	ні
5	Enhancing onboard memory by fitting additional memory sticks	131	127	47	38	343	3.02	0.98	НІ
	X	=				343	3.30	0.83	ні

KEY: VHI=very high influence, HI=high influence LI=low influence, VLI=very low influence, N=value, \bar{X} =Mean-Score, S. D= Standard Deviation, R.=Remarks.

Table 1 shows the perceived influence of postgraduate students' computer Self-efficacy on the use of e-Books in universities in Benue State with corresponding Standard Deviation values. As revealed from the table, the respondents agreed to all the items as Mean values ranging from 3.02 - 3.45 which are above the benchmark of 2.50. The table also revealed a cluster Mean of 3.30 and SD = 0.83 indicating that, postgraduate students' computer Self-efficacy influences their use of e-Books in universities in Benue State. **Hypothesis Testing**

Hypothesis 1. Postgraduate students' computer self-efficacy does not significantly influence their use of e-Books in universities in Benue State.

Response Options	Fo	Fe	Α	df	χ2-cal	Asymp.	Sig.	Remark
VHI	159	85.75	0.05	3	147.757 ^a	0.000		S, R
ні	137	85.75						
LI	26	85.75						
VLI	21	85.75						
TOTAL (N)	343							

Table 2: Chi Square test of goodness-of-fit analysis of the postgraduate students' computer self-efficacy on the use of e-Books in universities in Benue State.

Note: Fo=Observed frequency, Fe=expected frequency, df= degree of freedom, α =Alpha Level, x2-cal= chi-Square test of goodness of fit Calculated value, Asymp. Sig=Asymptotic significance value. Result is significant, when p-

value is less than alpha value (Ho is rejected) at Alpha Level of 0.05.

Table 2 shows the Chi-Square test of goodness-of-fit calculated value of 147.757^a, degree of freedom df =3 and a sig (P-value=0.00) which is less than the alpha value (α =.05). Since P<.05, the result is significant, therefore the null hypothesis is rejected. This implied that, postgraduate students' computer self-efficacy influences their use of e-Books in universities in Benue State.

Research Question 2: What is the perceived influence of postgraduate student computer self-efficacy on the use of e-journals in universities in Benue State?

 Table 3: Mean and standard deviation analysis of respondents on the perceived influence of postgraduate student computer self-efficacy on the use of e-journals in universities in Benue State

		N=343							
S/N	Item Description	VHI	HI	LI	VLI	Ν	Ā	S. D	Remarks
6	Subscription to electronic communications	154	147	22	20	343	3.27	0.82	HI
7	Use data transfer technology	161	133	30	19	343	3.27	0.84	HI
8	Use magazine available over the internet in electronic format.	139	153	33	18	343	3.25	0.82	HI
9	Use newsletter available over the internet in electronic format.	164	121	40	16	343	3.27	0.84	HI
10	Use serial publication available over the internet in electronic format	142	136	43	22	343	3.17	0.87	HI
	x	=				343	3.24	0.83	н

KEY: VHI=very high influence, HI=high influence LI=low influence, VLI=very low influence, N=value, \bar{X} =Mean-Score, S.D= Standard Deviation, R.=Remarks.

Table 3 shows the perceived influence of postgraduate student computer self-efficacy on the use of e-journals in universities in Benue State. As revealed from the table, the respondents agreed to all the items as Mean values ranging from 3.17 - 3.27 which are above the benchmark of 2.50. The table also revealed the Standard Deviation (SD) values ranging from 0.82 - 0.87 which showed that the respondents were homogeneous in their responses. The grand mean of all the items was 3.24 and SD=

0.83. this indicate that, postgraduate students' computer Self-efficacy influences their use of e-journals in universities in Benue State.

Hypothesis 2. Postgraduate students' computer self-efficacy does not significantly influence their use of e-journals in universities in Benue State.

Table 4: Chi Square test of goodness-of-fit analysis of the influence of postgraduate students' computer self-efficacy on the use of e-journals in universities in Benue State.

Response Options	Fo	Fe	Α	df	χ2-cal	Asymp. Sig.	Remark
VHI	152	85.75	0.05	3	93.453 ª	0.000	S, Reject Ho
н	138	85.75					
LI	34	85.75					
VLI	19	85.75					
TOTAL (N)	343						

Note: N=Total number of respondents. Fo=Observed frequency, Fe=expected frequency, df= degree of freedom, α =Alpha Level, x2-cal= chi-Square test of goodness of fit Calculated value, Asymp. Sig=Asymptotic significance value. Result is significant, when p-value is less than alpha value (Ho is rejected) at Alpha Level of 0.05.

Table 4 shows the Chi-square test of goodness-of-fit calculated value of 93.453^a , degree of freedom df =3 and a sig (P-value=0.00) which is less than the alpha value (α =.05). Since P<.05, the result is significant, therefore the null hypothesis is rejected. This implied that, postgraduate students' computer self-efficacy influences their use of e-journals in universities in Benue State.

Discussion of findings

The first findings of the study revealed that, Reading of e-books in the form of computer files, transferring of books as digital files over the internet to desktop computers, download of e-books as digital files on laptops computers, customizing onboard software using handheld devices and enhancing onboard memory by fitting additional memory sticks were the high influence postgraduate students' computer self-efficacy have on the use of e-Books in universities in Benue State. Similarly, a test of hypothesis revealed that postgraduate student's computer self-efficacy has positive significant influence on their use of e-Books in universities in Benue State. This finding corroborates with that of Bamidele and Popoola (2021) who disclosed that, the level of computer self-efficacy and facilitating conditions of students towards use of electronic information resources in Nigeria federal universities was high, and promoting the use of relevant electronic information resources such as e-books by students improve their quality of research and global competitiveness. Williams and Judd-Leonard (2014) revealed that students use e-books mainly to cross-validate and gain extra insights about what they have been taught.

The second findings of the study revealed that subscription to electronic communications use data transfer technology, use magazine available over the internet in electronic format, use newsletter available over the internet in electronic format, use serial publication available over the internet in electronic format were the high influence postgraduate student's computer self-efficacy have the use of e-journals in universities in Benue State. Similarly, a test of hypothesis revealed that

postgraduate student's computer self-efficacy has significant influence on their use of e-journals in universities in Benue State. These findings agreed with Adeyinka, Adedeji, Ayeni and Ogie (2008) who report that self-efficacy and use of electronic information such as e-journals jointly predict and contribute to academic performance of university students. Similarly, Azonobi and Uwaifo (2020) revealed that, the use of electronic information resources like e-journals such as African Journals Online (AJOL), electronic books, electronic theses and dissertation, electronic magazines and other electronic databases and high self-efficacy level increased the use of electronic information resources among the respondents. Azonobi and Uwaifo (2020) further revealed that, high self-efficacy level increased the use of electronic information resources among university students.

5.0 Conclusion of Findings

In conclusion, postgraduate students' computer self-efficacy has high influences the use of e-bookand e- journal for research in universities in Benue State

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