

EXTENT OF UTILIZATION OF ELECTRONIC LIBRARY AND SEARCH ENGINES FOR RESEARCH PURPOSES BY POSTGRADUATE BUSINESS EDUCATION STUDENTS IN UNIVERSITIES IN ANAMBRA STATE

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Abstract

The study investigated the extent of utilization of electronic library and search engines for research purposes by postgraduate business education students in universities in Anambra State. Two research questions guided the study and two null hypotheses were tested at .05 level of significance. Descriptive survey research design was adopted for the study. The population of the study comprised 128 postgraduate business education students in the two universities offering postgraduate degree programme in business education in Anambra state as at 2022/2023 academic session. The instrument for data collection was a researcher's structured questionnaire and validated by three experts in the Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam campus. Test of reliability of the instrument for internal consistency using Cronbach Alpha reliability method yielded coefficient values of 0.84 and 0.87 for clusters B1 and B2 respectively with an overall reliability co-efficient of 0 .85. Mean, standard deviation and t-test were used to analyze the research questions and test hypotheses for the study. Findings of the study revealed among others that postgraduate business education students utilize electronic library and search engines for research purposes in public universities in Anambra State to a low extent. Based on these findings, the researcher recommended among others that administrators of the postgraduate schools of universities in conjunction with the administrators of business education programmes should implement comprehensive digital literacy programmes for students.

Keywords: Electronic Library, Search Engines, Research, Postgraduate Students, Business Education

Introduction

Universities are formal institutions that provide higher education and training in various fields. They are authorized to award degrees at the undergraduate and postgraduate levels. These institutions can be owned and managed by the federal government, state government, or private individuals or groups. A university is a higher education institution that provides instruction in a variety of disciplines and generally has the authority to award degrees on students at both the undergraduate and postgraduate levels (Ugwu & Orsu, 2017). Undergraduates are students in universities who have not received bachelor's degree. They are university students who are not graduates. Undergraduates are students of universities who are studying their first degrees in various courses or academic programmes (Mole, 2017). On the other hand, postgraduate students are students who are pursuing a higher degree certification. A postgraduate is a student who has successfully completed an undergraduate degree level course at a college or university and is undertaking further study at a more advanced level. Ugwu and Orsu (2017) noted that postgraduate students are individuals who have acquired first degree certification from a university and are studying for a further degree. A postgraduate student in the context of this study is a student who is undergoing part-time or full-time higher degree study for the postgraduate diploma, masters and doctorate degree levels in business education as well as in other areas of discipline in the university.

Business education is an aspect of the vocational education programme offered at the tertiary level of education which prepares students for careers in business. Business education is the education that prepares individuals for business competencies necessary for teaching business attitudes, concepts, skills and knowledge. American Vocational Association in Umezulike (2021) stated that business education programme is a broad and comprehensive discipline whose instructional programme encompasses knowledge, skills, vocation and aptitude needed by all citizens in order to effectively manage their personal businesses and also function in the economic system. Edokpolor and Egbri (2017) viewed business education programme as a unique academic programme that equip its recipients with skills to function independently as self-employed and employers of labour. The postgraduate business education, often seen as the hallmark of business education, prepares starring employees and/or future leaders with fresh perspectives and knowledge (Roobeek & Ritter, 2016) while the customized executive courses for companies have the purpose to make immediate change in the company (through its leaders or employees). Ezenwafor and Onoakpunu (2017) averred that business education at the postgraduate level put students through the transformation process that turn them into managers who can be recognized as global citizens of the world. In becoming the global citizens of the world, postgraduate business education students are expected to carry out research to keep them abreast with the current trend in the field of business education.

Research is a systematic and scientific inquiry that aims to acquire knowledge and understanding of the unknown in various fields of human endeavor. It involves the collection, organization, and analysis of evidence to increase understanding of a topic, characterized by a particular attentiveness to controlling sources of bias and error (Saunders et al., 2023). Research is conducted to evaluate the validity of a hypothesis

or an interpretive framework, assemble a body of substantive knowledge and findings, and generate questions for further inquiries. The definition of research varies, but it generally involves a methodical procedure and plan, is theoretically grounded, and specifies a focused and well-defined research problem or question, informed by the empirical findings of others, analytically robust, and provides a detailed and complete description of data collection methods. The use of Information and Communication Technology (ICT) is essential for successful and timely research activities in universities. ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems, as well as the various services and applications associated with them, such as video conferencing and distance learning. ICTs are often spoken of in a particular context such as ICTs in education, health care, or libraries. ICT is the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information (Ifueko *et al.*, 2011) Saunders et al. (2019) stated that the primary aim of research is to advance societal and human knowledge, with universities largely responsible for this. They also emphasized the need for the effective utilization of Information and Communication Technology (ICT) to facilitate successful and timely research activities in universities. This underscores the importance of ICT in supporting academic research and knowledge advancement. Electronic library and search engines are ICT facilities that could be used to carry out research activities.

Electronic Libraries are essential study tools that supplement traditional library paper resources. Electronic resources refer to those materials or services that require a computer for access, manipulation, or reproduction including, but not limited to, numerical, graphical and textual files, electronic journals, bibliographic or full-text databases (Mommoh & Gomina, 2023). It includes electronic data available by remote access and direct access (fixed media) (Ukwetang, et al, 2021). In other words: remote access (electronic resources) refers to the use of electronic resources via computer networks (Internet) while direct access refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment. Their benefits include access to information that would otherwise be unavailable to the user owing to geographical location or financial constraints, access to more recent information, and comprehensive linkages to further resources or similar material (Owolabi, et al, 2016). Just like the electronic library, the search engine is another technology for research.

Search engines are open access sites and are the most widely used technology for postgraduate students' research (Ukwetang, et al, 2021). Many of them have open access on Internet Explorer programmes, but some are customizable tools supplying multiple search engines like "Copernic". Information which are accessed through these engines are mostly used by students for gathering the required information for their projects. Information obtained from these sites changes according to the student's level and the importance of the project content. By using different filters in the advanced search tabs, directly accessible resources provide more effective query results for specific types of documents such as documents with pdf, ppt, doc extensions (Tezer & Soykan, 2017). This makes it possible to access the information required or to extract unwanted resources.

Scholars like Olateju (2019) found that gender was a factor that could influence students' utilization of internet enabled technology for research. A study conducted by Whitmore et al. (2015) revealed significant disparity in usage of internet resources among male and female students. Fischer and Arnold in Odewunmi, et al (2019), stated that male and female students' access to the Internet at home and school has broadened their academic horizons, and gender inequalities in Internet utilization favored males more than girls. However, this assertion has not been empirically proven to be the case among postgraduate students in universities in Anambra State. It is against this background that the researcher sought to empirically investigate the extent of utilization of electronic library and search engines for research purposes by postgraduate business education students in universities in Anambra State.

Statement of the Problem

The significance of research to postgraduate students stems from its potential to contribute to the growth of knowledge and the generation of new ideas. It assists students in gaining a better grasp of their chosen area, developing critical thinking skills, and improving problem-solving ability. On the other hand, internet-enabled technology like as electronic libraries and search engines have simplified students' access to a variety of information and resources, allowing them to do more extensive and efficient research.

However, despite these advantages, many postgraduate business education students in Anambra State do not fully utilise these technologies. Many who supposed to source and get information online and utilize as fast as possible are not achieving this as they hardly make use of the ICT. This is obvious in the reliance on traditional knowledge sources like print materials and physical libraries, which is time-consuming and inefficient. As a result, postgraduate business education students struggle to complete their research on time, resulting in low-quality work and, in some circumstances, abandonment of their higher-education programmes.

Research Questions

The following research questions guided the study.

1. To what extent do postgraduate students of business education utilize electronic library technology for research purposes in universities in Anambra State?
2. To what extent do postgraduate students of business education utilize search engines for research purposes in universities in Anambra State?

Hypotheses

The following null hypothesis was tested at .05 level of significance:

H₀₁: There is no significant difference in the mean ratings of male and female postgraduate business education students in universities in Anambra State on the extent they utilize electronic library for research purposes in universities in Anambra State.

H₀₂: There is no significant difference in the mean ratings of male and female postgraduate business education students in universities in Anambra State on the extent they utilize search engines for research purposes in universities in Anambra State.

Methods

Descriptive survey research design was adopted for the study. The population of the study comprised 128 postgraduate business education students in the two universities offering postgraduate degree programmes in business education in Anambra state as at 2022/2023 academic session. The sample size used for the study was 128. The researcher did not sample the population of the study because it was manageable. This is in line with Nworgu (2015) who stated that if a population is manageable, the entire population can be studied. The instrument for data collection was a structured questionnaire developed by the researcher, based on the reviewed literature and research questions guiding the study. The instrument was titled: Questionnaire on Utilization of Electronic Library and Search Engines for Research Purpose (QUELSERP) with two main Sections – A and B. Section A contained one item on respondents’ background information covering gender while Section B contained a total of 20 items arranged in two Clusters, B1 and B2. Cluster B1 contains 10 items on the utilization of electronic library for research purpose and Cluster B2 contained 10 items on the utilization of search engines for research purpose. The questionnaire was structured on a 4- point rating scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by three experts. Two in the Department of Vocational Education and one in the Department of Educational Foundation, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus.

To establish the reliability of the instrument, a pilot test was carried out. The instrument was administered on 20 business education Postgraduate students in Delta State University Abraka in Delta State, who were not included in the population of the study. The application of the Cronbach Alpha reliability for the five clusters yielded coefficient values of 0.84, and 0.87 for clusters B1 and B2 respectively with an overall reliability coefficient of 0.85. The researcher administered 128 copies of the instrument for data collection personally to the respondents in the Universities with the aid of 2 research assistants. The researcher briefed the research assistants on the mode of the instrument administration and retrieval. The questionnaire was administered by the researcher or research assistants on the respondents, applying on the spot approach in their respective Departments or Lecture halls. Those respondents who were not disposed to fill the instrument for immediate retrieval, an appointment of revisit was booked with the researcher or research assistants. This procedure lasted for four weeks. Out of the 128 copies of questionnaire administered to the respondents, 118 copies were returned in good condition. This gave a questionnaire return rate of 92.19% and lose rate of 7.81%.

Data collected from the respondents was analyzed using descriptive statistics of mean and standard deviation. The mean value was used to answer the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents’ ratings. The decision rule was based on the real limit of numbers as shown below:

Response option	Values	Real Limit
Very High Extent	4	3.50-4.00
High Extent	3	2.50-3.49
Low Extent	2	1.50-2.49

Table 2:
Extent postgraduate business education students utilize search engines for research purposes

N = 118

S/N	Item	Mean	SD	Remark
11	To what extent do you utilize search engines for;	1.52	.84	Low Extent
12	Accessing information through Google search	1.65	.92	Low Extent
13	Accessing research analysis tools through Yahoo search engine	1.77	.61	Low Extent
14	Using ask.com to get research data	1.90	.83	Low Extent
15	Accessing research materials through Bing	1.41	.83	Very Low Extent
16	Locating materials for literature review through AOL search engine	1.43	.04	Very Low Extent
17	Using Webopedia to get information for research	1.28	.72	Very Low Extent
18	Accessing research information through Wikipedia	1.06	.98	Very Low Extent
19	Using the Devilfinder search engine to access data	1.63	.95	Low Extent
20	Retrieving data through ehow search engine	1.44	.80	Very Low Extent
Mean of means		1.51		Low Extent

Data in Table 2 showed the extent postgraduate business education students utilize search engines for research purposes in public Universities in Anambra State. The Table showed that postgraduate business education students utilized search engine to a low extent in items 11, 12, 13, 14, 19 with mean responses of 1.52, 1.65, 1.77, 1.90, and 1.63 respectively while items 15, 16, 17, 18 and 20 with mean responses of 1.41, 1.43, 1.28, 1.06 and 1.44 respectively were utilized to a very low extent. Meanwhile, the mean of means was 1.51 indicating that postgraduate business education students utilized search engines for research purposes in public Universities in Anambra State to a low extent.

Hypothesis 1

There is no significant difference in the mean rating of male and female postgraduate business education students in public Universities in Anambra State on the extent they utilize electronic library for research purposes.

Table 3:
Independent t-test of male and female postgraduate business education students on the extent they utilize electronic library for research purposes.

Variation	N	Mean	SD	t-cal	df	p-value
Male business education students	67	30.62	8.81	.167	116	.867
Female business education students	51	30.90	8.89			

Result from Table 3 indicated the independent t-test of male and female postgraduate business education students on the extent they utilize electronic library for research purposes in public Universities in Anambra State. The results revealed t-calculated =.167, p-value=.867 and degrees of freedom of 116. The p-value of .867 was greater than .05 level of significance, hence the decision was not to reject the null hypothesis of significant difference in the mean ratings of male and female on the extent postgraduate business education students utilize electronic library for research purposes. Therefore, the study revealed that there is no significant difference in the mean ratings of male and female postgraduate business education students on the extent of utilizing electronic library for research purposes in public Universities in Anambra State.

Hypothesis 3

There is no significant differences in the mean ratings of male and female postgraduate business education students in public Universities in Anambra State on the extent they utilize search engines for research purposes.

Table 4:
Independent t-test of male and female postgraduate business education students on the extent they utilize search engines for research purposes.

Variation	N	Mean	SD	t-cal	df	p-value.
Male business education students	67	26.79	7.26	.151	116	.680
Female business education students	51	26.58	7.17			

Analysis from Table 4 indicated the independent t-test of male and female postgraduate business education students on the extent they utilize search engines for research purposes in public universities in Anambra State. The result depicted t-calculated was .151 with 116 degrees o freedom and p-value of .680. Since the p-value of .680 was greater than .05 level of significance, the decision was not to reject the null hypothesis of no significant difference of postgraduate business education students on the extent they utilize search engines for research purposes. Henceforth, there is no significant difference in the mean ratings of male and female postgraduate business education students on the extent they utilize search engines for research purposes in public Universities in Anambra State.

Discussion of Findings

Finding of the study revealed that postgraduate business education students utilized electronic library for research purpose in public Universities in Anambra State to a low extent. This finding may have resulted because postgraduate students may have limited access to electronic resources due to a lack of availability or subscription to relevant databases and e-journals in their institutions. This can hinder their ability to effectively use electronic libraries for research. Another reason might be inadequate internet connectivity, power outages, and other infrastructure-related issues can limit postgraduate students' ability to use electronic libraries for research purposes. Some postgraduate students may have a preference for traditional print materials over electronic resources, finding them more comfortable or reliable for their research needs. This is in agreement with Oberiri and Elif (2020) who revealed that students perceived that the lack of digital readiness among their staff and institution, the absence of electronic library for easy accessibility to journals from the scientific database, and inefficient cybercafe and internet facility within their University settings were the main issues discouraging the utilization of the internet within their institutions. Similarly, Egbri (2015) reported that internet resources like electronic library were grossly under-utilized for research by PG business education students in Universities in South-East and South-South Nigeria. Egbri revealed that non-availability of various Internet resources, issues surrounding research process and activities; improper guidance for research process and activities and lack of provision of fund for cost/power supply among others were some challenges found to be militating against the effective utilization of Internet resources for research by PG business education students. In contrast, Nwafor et al. (2018) revealed that both staff and students used most of electronic information resources in reference information service to a great extent. The differences in findings between Oberiri and Elif (2020), Egbri (2015) and Nwafor et al. (2018) may be attributed to various factors, including the specific institutions or regions studied, the timing of the research, and the methods used to collect data. It's important to recognize that perceptions and experiences regarding digital resources and internet utilization can vary widely among individuals and institutions, leading to differing research outcomes.

Furthermore, the study revealed that no significant difference in the mean rating of male and female postgraduate business education students on the extent of utilizing electronic library technology for research library technology for research purposes in public Universities in Anambra State. This finding is noteworthy as it suggests that gender does not appear to be a decisive factor in determining the adoption and utilization of electronic library technology among postgraduate business education students in this region. The findings imply that both male and female postgraduate students utilized electronic library for research purpose to a low extent. This is in agreement with the findings of Egbri (2015) who reported that internet resources like electronic library were grossly under-utilized for research by PG business education students in Universities in South-East and South-South Nigeria.

Finding of the study revealed that postgraduate business education students utilized search engines for research purpose for research purpose in public Universities in Anambra State to a low extent. The finding of the study may have resulted because many

postgraduate students in the area may have limited digital literacy skills, which could hinder their ability to effectively use search engines for research. They may not be familiar with advanced search techniques or may struggle to filter and evaluate search results. Some postgraduate students may have a preference for traditional research methods, such as library resources and textbooks. They might not be inclined to adapt to newer digital research tools like search engines. The finding of the study is in agreement with Mussa (2018) who reported that students use search engines for academic purposes to a low extent. Apuke and Iyendo (2018) revealed that students perceived that the lack of digital readiness among their staff and institution and inefficient cybercafe and internet facility within their University settings were the main issues discouraging the utilization of the internet within their Institutions.

Furthermore, finding of the study revealed no significant difference in the mean ratings of male and female postgraduate business education students on the extent they utilize search engines for research purposes in public Universities in Anambra State. This indicate that gender did not influence the opinion of postgraduate business education student on the extent they utilize search engines for research purpose. Since both male and female postgraduate business education students are rated similarly in terms of low utilization of search engines, it suggests that this underutilization is a widespread issue among postgraduate business education students in Anambra State, rather than being specific to one gender. This is in line with Mussa (2018) who noted that though students utilize search engines, the frequency to which they use search engines for academic purpose is poor.

Conclusion

Based on the findings of the study, the researchers conclude that postgraduate business education students utilized electronic library and search engines for research purpose for research purpose in public Universities in Anambra State to a low extent. While these technologies play an important role in aiding research, underutilization has resulted in poor research outputs and, in some circumstances, the termination of higher education programmes. This circumstance necessitates the introduction of initiatives by administrators and other stakeholders in the business education programme to improve students' use of electronic library and search engines for research purposes.

Recommendations

Based on the findings of this study, the researcher proffered the following recommendations:

1. Administrators of postgraduate schools of the Universities in conjunction with the administrators of business education programmes should implement comprehensive digital literacy programmes for students.
2. Administrators of the postgraduate schools of the Universities in conjunction with the administrators of business education programmes should organize digital research skills workshops.

REFERENCES

- Apuke, O. D. & Tunca, E. A. (2020). The utilization of internet resources for learning and research among students of Taraba state university, Jalingo, Nigeria. *Library Philosophy and Practice (e-journal)*. 3864.
<https://digitalcommons.unl.edu/libphilprac/3864>.
- Edokpolor, J. E. & Egbri, J. N. (2017). Business education in Nigeria for value re-orientation: A strategic approach for poverty alleviation and national development. *Journal of Educational Research and Review (JERR)*, 5 (3), 41-48.
- Egbri, J.N. (2015). *Utilization of Internet Resources for Research by Postgraduate Business Education Students in Universities in South- East and South-South Nigeria* (A Master's thesis, department of vocational teacher education, university of Nigeria, Nsukka).
- Ezenwafor, J.I. & Onoakpunu, M.O. (2017). Perception of business educators on the relevance of integrating globalized workplace skills in the business education curriculum in tertiary institutions in Nigeria. *Education & Science Journal of Policy Review and Curriculum Development*, 7(1), 1-10.
- Mole, A.J.C. (2017). Assessment of academic utilization of online information resources by undergraduate students in university of Nigeria, Nsukka. *International Journal of Knowledge Content Development & Technology*, 7(3), 29-48, 2017.
<http://dx.doi.org/10.5865/IJKCT.2017.7.3.029>.
- Mommoh, R. L.& Gomina, H. E. (2023). Utilization of electronic resources in university of Abuja library by undergraduate students of university of Abuja, Nigeria. *Library Philosophy and Practice (e-journal)*, 7597.
<https://digitalcommons.unl.edu/libphilprac/7597>
- Nwafor, M.C., Okoro, J. U. & Nwadike, C. (2018). Extent of use of electronic information resources for reference and information services in Nnamdi Azikiwe Library University of Nigeria, Nsukka.. *Journal of Applied Information Science and Technology*, 11 (1), 51-64.
- Nworgu, B. G. (2015). *Educational research: Basic issues and methodology* (3rd edition). University Trust Publishers.
- Oberiri, D.A. & Elif, A.T. (2020). The utilization of internet resources for learning and research among students of Taraba state university, Jalingo, Nigeria. *Library Philosophy and Practice*, 1, 1-32.
- Odewumi, M.O., Bamigboye, F.B., Adeniran, A.O. & Bamigboye, O.O. (2019). Use of Internet medium for postgraduate students in African Universities: Case study Nigeria universities. *Anthropologist*, 37(1-3), 8-13.
- Olateju, J.A. (2019). Utilization of the internet by undergraduate students of the University of Ibadan, Nigeria. *International Journal of Science and Technology educational research*, 10(3), 30-36. DOI: 10.5897/IJSTER2018.0441.
- Owolabi, S., Idowu, O.A., Okocha, F. & Ogundare, A.O. (2016). Utilization of electronic

- information resources by undergraduate students of university of Ibadan: A case study of social sciences and education. *Journal of Education and Practice*, 7(13), 30-36.
- Roobeek, A. & Ritter, M. (2016). *Rethinking Business Education for Relevance in Business and Society in times of Disruptive Change*. Paper presented at AoM, Anaheim, LA, USA, August 2016.
- Saunders, M.N.K, Lewis, P. & Thornhill, A. (2023). *Research Methods for Business Students* (9th edition). Pearson.
- Saunders, M.N.K, Lewis, P. & Thornhill, A. (2019). *Research Methods for Business Students* (8th edition). Pearson.
- Tezer, M. & Soykan, F., (2017). Acceptance scale of tablet computers by secondary education students: validity and reliability study. *Journal of University Computer Science*, 23 (12), 1132e1146.
http://www.jucs.org/jucs_23_12/acceptance_scale_of_tablet.
- Ugwu, C.I. & Orsu, E.N. (2017). Challenges of utilization of online information resources by undergraduate students: implications for information services. *Library Philosophy and Practice (E-journal)*. 1668.
<https://digitalcommons.unl.edu/libphilprac/1668>.
- Ukwetang, J.O., Eja, I.E., Itu, P.O. & James, D.D. (2021). Utilization of internet resources and academic performance of educational technology students in faculty of education, university of Calabar – Nigeria. *European Journal of Scientific Research*, 158 (3), 247 – 255.
- Umezulike, A. N. (2021). Inhibitions and rewards of professionalization of business education programme in Nigeria. *Nigerian Journal of Business Education (NIGJBED)*, 8(1), 32-39.
- Whitmore, A., Agarwal, A. & Da Xu, L. (2015). The internet of things-A survey of topics and trends. *Information Systems Frontiers*, 17(2), 261-274.