

EXTENT OF UTILIZATION OF INTERNET RESOURCES FOR RESEARCH BY BUSINESS EDUCATION STUDENTS IN COLLEGES OF EDUCATION IN SOUTH-SOUTH NIGERIA

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Abstract

The study examined the extent of utilization of electronic book resources and electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria. Two specific purposes, research questions, and hypotheses guided the study. A descriptive survey research design was adopted for the study. The population comprised 325 Business Education students in Colleges of Education in South-South Nigeria, and the entire population was studied because it was manageable. Data were collected using a structured questionnaire titled Extent of Utilization of Electronic Book and Electronic Journal Resources for Research by Business Education Students Questionnaire (EUEJRBEQ). The instrument was validated by three experts and tested for reliability using Cronbach Alpha reliability coefficient, which yielded an overall reliability index of 0.98. Three hundred and twenty-five copies of the questionnaire were administered with the assistance of five research assistants, while 133 copies were retrieved and used for data analysis. Mean and standard deviation were used to answer the research questions, while t-test statistics were used to test the hypotheses at the 0.05 level of significance. The findings revealed that electronic book resources were utilized to a moderate extent, while electronic journal resources were utilized to a low extent by Business Education students for research purposes. The hypotheses tested showed that gender and institutional ownership (Federal and State Colleges of Education) did not significantly influence students' utilization of electronic book resources and electronic journal resources for research. The study concluded that despite the availability of electronic scholarly resources, Business Education students have not fully maximized their potential for research activities due to challenges relating to awareness, accessibility, digital literacy skills, and infrastructure. It was recommended that Colleges of Education should provide adequate digital infrastructure and organize regular training programmes to improve students' competencies in accessing and utilizing electronic book and electronic journal resources for research. The study contributes empirical evidence on the utilization of electronic scholarly resources among Business Education students in Colleges of Education in South-South Nigeria.

Keywords: Internet resources; Electronic book resources; Electronic journal resources; Research utilization; Business Education students.

Introduction

Business Education is a vocational-oriented academic programme designed to equip learners with the knowledge, skills, attitudes, and competencies required for effective participation in the world of work, self-reliance, and entrepreneurial development. The programme prepares individuals for careers in accounting, office technology and management, marketing, entrepreneurship, and other business-related occupations through the acquisition of relevant theoretical knowledge and practical skills. According to the American Vocational Association as cited in Umezulike (2021), Business Education is a comprehensive instructional programme that integrates knowledge, vocational skills, and attitudes required for individuals to manage personal and organizational business activities effectively. Similarly, Edokpolor and Egbri

(2017) described Business Education as a unique discipline that develops recipients with competencies necessary for employment, self-employment, and effective functioning in public and private sector organizations. The fundamental objectives of Business Education include producing competent manpower with appropriate knowledge, skills, and attitudes for efficient utilization of resources in the production and distribution of goods and services (Okifo & Ayo, 2015).

In Colleges of Education, Business Education students are expected to participate in various academic activities such as assignments, seminars, teaching practice reports, projects, and research studies. These activities require students to access, evaluate, and utilize reliable information resources to develop knowledge and produce quality academic outputs. Consequently, effective research among Business Education students depends significantly on their ability to identify and utilize appropriate information sources that support academic inquiry and knowledge development. Research remains a fundamental component of academic activities in tertiary institutions. It is a systematic process involving the collection, organization, analysis, and interpretation of information to generate new knowledge or provide solutions to existing problems. Dewing (2022) viewed research as a creative and systematic activity aimed at increasing knowledge, while Lewis (2022) emphasized that research enhances understanding by enabling individuals to investigate concepts, issues, and phenomena scientifically. Similarly, Saunders, Lewis, and Thornhill (2023) explained that research contributes to knowledge advancement and societal development by providing evidence-based solutions to identified problems. For students in tertiary institutions, successful research requires access to relevant, current, and credible information resources, which have become increasingly available through Internet-based platforms.

The Internet has significantly transformed the process of information acquisition, dissemination, and utilization within educational institutions. Oyedele and Oladeji (2016) defined the Internet as a global network of interconnected computers that facilitates communication and information exchange among users. Jayashree (2021) further described the Internet as a worldwide digital network connecting individuals, institutions, businesses, and governments through technological systems. Through Internet connectivity, students and researchers can access diverse academic resources, including electronic books, electronic journals, databases, institutional repositories, conference proceedings, and other scholarly materials. Adewumi and Mukah (2019) explained that Internet resources consist of online platforms, digital libraries, databases, and websites that provide users with educational information required for academic and professional purposes.

Internet resource utilization refers to the process of accessing, evaluating, and applying online information resources to achieve specific objectives. In higher education institutions, effective utilization of Internet resources has become essential for literature review, academic writing, research development, and knowledge acquisition because these resources provide immediate access to current and globally distributed information. However, the availability of Internet resources does not automatically guarantee effective utilization, as students' usage is influenced by factors such as awareness, digital literacy skills, accessibility, institutional support, and technological infrastructure.

Among the various Internet resources available for academic purposes, electronic books have emerged as important sources of scholarly information. An electronic book (e-book) refers to a digital version of a conventional printed book that can be accessed through computers, tablets, smartphones, and other electronic devices. Liaw and Huang (2014) defined an electronic book as a digital text designed for reading through technological devices, while Loebbecke (2010) explained that e-books are products of electronic publishing that eliminate the need for physical printing and distribution. Electronic books provide several advantages, including portability, keyword searching, bookmarking, highlighting, annotation, hyperlinks, and round-the-clock accessibility (Rosso, 2019). These characteristics make electronic books valuable

resources for students engaged in academic research because they facilitate quick retrieval of information and effective literature review.

Academic libraries have increasingly integrated electronic books into their collections due to the growing demand for digital learning resources. Liasu and Bakrin (2022) noted that libraries now provide electronic books because of increased demand for digital materials, limited storage space for printed resources, rising costs of textbooks, and the need to support flexible learning environments. Tella et al. (2018) reported that Nigerian universities increasingly provide students with electronic books through digital libraries and institutional platforms to enhance learning and research activities. Similarly, Rabi, Ojukwu, and Popoola (2016) observed that electronic book databases such as NetLibrary, Books24x7, Questia, and Ebrary provide students with access to extensive collections of academic materials.

Despite the advantages associated with electronic books, empirical studies have shown variations in their utilization among students. Okocha (2020) investigated the adoption of academic electronic books among Nigerian university students and found that although students were aware of electronic books, frequent utilization remained relatively low. The study identified inadequate awareness, limited accessibility, and technological barriers as factors affecting effective usage. Similarly, Danjuma and Oluwafemi (2018) examined the utilization of open access resources among students in private universities in Nigeria and found that utilization was low due to poor awareness, unstable Internet connectivity, erratic electricity supply, and inadequate assistance from library personnel.

However, some studies have reported higher utilization levels of electronic books among students. Tella et al. (2018) found that students had positive perceptions of electronic books and considered them useful for improving learning efficiency, completing academic tasks, and supporting research activities. Similarly, Khan, Bhatti, and Khan (2016) reported that students in engineering, agricultural sciences, and social sciences increasingly relied on electronic books because of their convenience, accessibility, and ability to support research activities. Nevertheless, the study identified inadequate electronic content and limited access to computers as constraints affecting effective utilization.

Another important Internet resource that has transformed academic research is the electronic journal. Electronic journals are scholarly publications made available in digital format through the Internet, databases, and institutional platforms. Panda and Mohanta (2018) defined electronic journals as serial publications, magazines, newsletters, and scholarly materials available electronically through online platforms. Boakye, Martin-Yeboah, and Fynn (2015) described electronic journals as digital scholarly publications that facilitate communication and dissemination of research findings. Electronic journals are considered authoritative sources of academic information because articles published in reputable journals undergo peer-review processes before dissemination.

The availability of electronic journals has enhanced access to current scholarly information among students and researchers. Singh and Bebi (2022) noted that journals remain the major channels through which research findings are communicated and scientific knowledge is advanced. Cook and Jones (2020) explained that electronic journals are distributed through publisher websites, institutional subscriptions, and online databases, thereby enabling researchers to access scholarly information regardless of geographical limitations. Madondo, Sithole, and Chisita (2017) further observed that electronic journals provide researchers with current information, hyperlinks to related studies, and opportunities to access publications that may otherwise be unavailable due to location or financial constraints. Maxymuk (2014) added that electronic journals require less physical storage space and can be accessed remotely, increasing their convenience for academic users.

Despite these benefits, effective utilization of electronic journals remains a challenge in many developing educational contexts. Akpojotor (2016) identified inadequate telecommunications infrastructure, high subscription costs, poor user skills, and unstable

Internet connectivity as major barriers affecting electronic journal utilization among students. Empirical evidence also indicates differences in students' utilization patterns. Otu, Asante, and Martin (2015) found that electronic journals were among the most frequently utilized academic resources because they provided access to current research findings. Similarly, Bansode (2023) reported that research scholars, postgraduate students, and lecturers frequently used electronic journals for research, updating knowledge, and instructional preparation.

Conversely, some studies have reported limited utilization of electronic journals. Agba, Kigongo-Bukenya, and Nyumba (2024) found that inadequate access facilities, poor knowledge of search strategies, insufficient awareness, and lack of technological support hindered effective utilization of electronic journals. Aina (2018) also observed that students in Nigerian tertiary institutions continued to experience difficulties in accessing and effectively using electronic resources despite their increasing availability. Ojedokun and Lumor (2017) further reported that inadequate ICT skills limited students' ability to effectively search, retrieve, and utilize electronic information resources. Similarly, Nweze (2020) established that students who frequently utilized electronic resources demonstrated better research skills and academic performance compared with those who rarely used such resources.

In relation to Business Education students, Okeke-Ezeanyanwu and Ogbughalu (2024) investigated the utilization of electronic libraries and search engines for research purposes among postgraduate Business Education students in universities in Anambra State. The findings revealed that students utilized electronic libraries and search engines to a low extent. This suggests that challenges associated with electronic resource utilization may persist among Business Education students despite the increasing availability of digital resources.

Studies have also examined differences in electronic resource utilization across institutions. Cason and Scoyoc (2016) found that undergraduate students in an electronic library environment relied more on general Internet sources than institutionally subscribed scholarly databases, thereby raising concerns about the quality of information sources used for research. Oyekanmi (2017) reported that Federal institutions often possess better research infrastructure, Internet facilities, and digital resources compared with State institutions. Similarly, Adomi and Igun (2020) observed that State institutions frequently experience challenges in accessing digital resources due to funding limitations, inadequate infrastructure, and limited technological support. Although several studies have examined electronic resource utilization among university students, postgraduate students, lecturers, and general tertiary institution users, limited attention has been given to Business Education students in Colleges of Education. Existing studies such as Okeke-Ezeanyanwu and Ogbughalu (2024), Enwere (2024), Omekwu et al. (2023), and Ile and Alonta (2019) focused on different categories of students and institutions outside the specific context of Business Education students in Colleges of Education in South-South Nigeria. Consequently, there remains insufficient empirical evidence regarding the extent to which Business Education students utilize electronic book resources and electronic journal resources for research purposes.

The foregoing review indicates that electronic books and electronic journals are essential Internet resources that support effective research by providing access to current, reliable, and scholarly information. However, previous studies have revealed inconsistent levels of utilization due to differences in awareness, accessibility, digital skills, institutional support, and technological infrastructure. Therefore, the present study was undertaken to determine the extent of utilization of electronic book resources and electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria.

Statement of the Problem

Research is a fundamental component of Business Education programmes in Colleges of Education because it enables students to acquire investigative skills, develop critical thinking, and generate solutions to educational and business-related problems. To conduct quality

research, students are expected to utilize credible and current information sources, particularly Internet-based resources such as electronic books and electronic journals. These resources provide access to up-to-date scholarly literature, peer-reviewed articles, textbooks, and other academic materials that enhance the quality of literature review, improve the credibility of research findings, and promote evidence-based academic writing (Liaw & Huang, 2014; Panda & Mohanta, 2018).

Despite the increasing availability of electronic books and electronic journals through institutional libraries, digital repositories, and online databases, observations indicate that many Business Education students still rely heavily on printed materials, lecture notes, and general Internet websites that may not contain scholarly or peer-reviewed information. Consequently, students' seminar papers, assignments, projects, and other research reports often reflect inadequate use of current literature, weak theoretical foundations, outdated references, and poor citation practices. This situation may undermine the quality of research produced by Business Education students and limit their ability to acquire the research competencies expected of graduates of Colleges of Education.

Empirical studies have reported inconsistent findings regarding the utilization of electronic book and electronic journal resources for research. While studies such as Tella et al. (2018) and Otu, Asante, and Martin (2015) reported substantial utilization of electronic resources for academic purposes, others such as Okocha (2020), Agba, Kigongo-Bukenya, and Nyumba (2024), and Cason and Scoyoc (2016) found that students' utilization remained low because of challenges including poor Internet connectivity, inadequate ICT skills, limited awareness, high subscription costs, and insufficient access to digital facilities. These divergent findings suggest that the level of utilization of electronic books and electronic journals may vary across institutions and geographical locations.

Furthermore, most previous studies concentrated on university students, postgraduate students, lecturers, or investigated Internet resources broadly without specifically examining the utilization of electronic book resources and electronic journal resources among Business Education students in Colleges of Education. There is therefore limited empirical evidence on the extent to which Business Education students in Colleges of Education in South-South Nigeria utilize these two important Internet resources for research. This gap in the literature makes it difficult for educational administrators, librarians, and lecturers to develop appropriate strategies for improving students' utilization of electronic scholarly resources and enhancing the quality of research in Colleges of Education.

It was against this background that this study sought to ascertain the extent of utilization of electronic book resources and electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria. Specifically, the study sought to determine the extent to which Business Education students utilize electronic book resources and electronic journal resources for research.

Purpose of the Study

The main purpose of this study was to ascertain the extent of utilization of Internet resources for research by Business Education students in Colleges of Education in South-South Nigeria. Specifically, the study sought to:

1. determine the extent of utilization of electronic book resources for research by Business Education students in Colleges of Education in South-South Nigeria;
2. determine the extent of utilization of electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria.

Research Questions

The following research questions guided the study:

1. To what extent were electronic book resources utilized for research by Business Education students in Colleges of Education in South-South Nigeria?
2. To what extent were electronic journal resources utilized for research by Business Education students in Colleges of Education in South-South Nigeria?

Hypotheses

The following null hypotheses were formulated to guide the study and were tested at the 0.05 level of significance:

H₀₁: There was no significant difference in the mean ratings of male and female Business Education students in Colleges of Education in South-South Nigeria on the extent of utilization of electronic book resources for research.

H₀₂: There was no significant difference in the mean ratings of Business Education students in Federal and State Colleges of Education in South-South Nigeria on the extent of utilization of electronic journal resources for research.

Methodology

This study adopted the descriptive survey research design. The design was considered appropriate because it enabled the researcher to collect data from Business Education students and systematically describe the extent of utilization of Internet resources for research without manipulating any of the study variables. Specifically, the study focused on the extent of utilization of electronic book resources and electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria. The descriptive survey design was therefore suitable because it facilitated the collection of respondents' opinions and experiences regarding the extent to which these Internet resources were utilized for research purposes.

The study was carried out in Colleges of Education located in the South-South geopolitical zone of Nigeria. The South-South geopolitical zone comprises six states, namely Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers States. The zone has ten (10) Colleges of Education, consisting of three (3) Federal Colleges of Education and seven (7) State Colleges of Education. These institutions were selected because they offer Business Education programmes and provide the population required for the study. The study was conducted in this geographical area to determine the extent of utilization of electronic book resources and electronic journal resources for research by Business Education students in Colleges of Education in South-South Nigeria.

The population of the study comprised 325 Business Education students from the ten Colleges of Education in South-South Nigeria. The population figure was obtained from the Heads of Business Education Departments of the respective Colleges of Education. These students constituted the population because they were directly involved in academic research activities and were expected to utilize Internet-based resources, particularly electronic book and electronic journal resources, in the course of their studies.

The entire population of 325 Business Education students was used for the study; therefore, no sampling technique was employed. The census approach was adopted because the population was relatively small, accessible, and manageable. This approach ensured that all Business Education students in the selected Colleges of Education participated in the study, thereby eliminating sampling error and improving the representativeness and reliability of the findings. The instrument used for data collection was a structured questionnaire titled *Extent of Utilization of Electronic Book and Electronic Journal Resources for Research by Business Education Students Questionnaire (EUEJRBESQ)*. The questionnaire consisted of two sections. Section A contained items that elicited information on the demographic characteristics of the respondents, while Section B comprised items developed in line with the variables of the study. Section B was organized into two clusters. Cluster I contained sixteen (16) items on the utilization of electronic book resources, while Cluster II contained eighteen (18) items on the utilization of electronic journal resources. The questionnaire consisted of a total of thirty-four (34) items measured on a four-point rating scale of Very Much Utilized (VMU), Much Utilized (MU), Averagely Utilized (AU), and Not Utilized (NU), weighted as 4, 3, 2, and 1 point respectively. The instrument was designed to obtain information on the extent to which Business Education students utilized electronic book resources and electronic journal resources for research purposes in Colleges of Education in South-South Nigeria.

The questionnaire was subjected to face and content validation by three experts. Two of the experts were drawn from the Department of Business Education, while one expert was drawn from the Measurement and Evaluation Unit of the Department of Science Education, Ebonyi State University, Abakaliki. The validators examined the instrument based on the relevance, clarity, appropriateness, and adequacy of the items in measuring the study variables, namely electronic book resources and electronic journal resources. The corrections, observations, and suggestions provided by the experts were incorporated into the final version of the questionnaire before its administration to the respondents. The reliability of the instrument was established through a pilot test conducted using thirty (30) Business Education students from a College of Education in Ebonyi State. The institution was selected because it was outside the study area but possessed similar characteristics with the institutions involved in the study. The data obtained from the pilot testing were analyzed using the Cronbach Alpha reliability technique to determine the internal consistency of the instrument. The reliability coefficients obtained for the clusters were 0.84 for Electronic Book Resources and 0.87 for Electronic Journal Resources, while the overall reliability coefficient of the instrument was 0.86. These coefficients indicated that the instrument possessed a high level of internal consistency and was therefore considered reliable for data collection.

The researcher administered 325 copies of the questionnaire personally to the respondents with the assistance of six trained research assistants drawn from the Colleges of Education in the South-South geopolitical zone. The research assistants were adequately briefed on the purpose of the study and the procedures for administering and retrieving the questionnaires. The direct administration approach was adopted to ensure proper distribution, clarification of items where necessary, and effective retrieval of the instruments. All the 325 copies of the questionnaire administered were successfully retrieved, resulting in a 100 percent return rate. The data collected from the respondents were analyzed using mean and standard deviation to answer the research questions. The mean was used to determine the extent of utilization of electronic book resources and electronic journal resources among Business Education students, while the standard deviation was used to determine the extent to which respondents' ratings deviated from one another. The null hypotheses formulated for the study were tested using the independent samples *t*-test at the 0.05 level of significance. The independent samples *t*-test was considered appropriate because the study sought to determine whether significant differences existed between groups of respondents regarding their utilization of Internet resources for research.

The decision on the research questions was based on the following real limits of mean interpretation:

Response Category	Weight	Mean Range	Decision
Very Much Utilized (VMU)	4	3.50–4.00	Very Much Utilized
Much Utilized (MU)	3	2.50–3.49	Much Utilized
Averagely Utilized (AU)	2	1.50–2.49	Averagely Utilized
Not Utilized (NU)	1	1.00–1.49	Not Utilized

For the hypotheses, the null hypothesis was rejected when the calculated p -value was less than the 0.05 level of significance. Conversely, the null hypothesis was not rejected when the calculated p -value was greater than or equal to 0.05. This criterion guided the interpretation of the statistical results and the conclusions drawn from the study.

Results

Research Questions

Research Question One: what is the extent of utilization of electronic books for research by business education students in Colleges of education in South-South Nigeria??

Data collected with items 1 to 16 of the instrument were used to answer this research question. Summary of results is presented on Table 1.

Table 1: Mean Ratings and Standard Deviation Scores on the Extent of Utilization of Electronic Books for Research by Business Education Students in Colleges of Education

S/N	N	Mean	Std.	Remarks
1. Amazon	325	2.27	1.10	Averagely Utilized
2. University libraries	325	2.78	.97	Much Utilized
3. Apple books	325	2.00	.96	Averagely Utilized
4. Kobo books	325	1.79	.92	Averagely Utilized
5. Project Guterberg	325	2.00	1.02	Averagely Utilized
6. Internet Archive	325	2.61	1.09	Much Utilized
7. Kitabo	325	1.69	.90	Averagely Utilized
8. Instapaper	325	2.09	1.10	Averagely Utilized
9. Nook	325	2.53	1.13	Much Utilized
10. Libby	325	2.20	1.08	Averagely Utilized
11. FBreader	325	2.18	1.06	Averagely Utilized
12. Open access repository	325	2.11	1.00	Averagely Utilized
13. Research database	325	2.89	1.09	Much Utilized
14. Online bookstore	325	2.57	1.07	Much Utilized
15. Coursera,	325	2.20	.240	Averagely Utilized
16. EdX	325	1.97	.96	Averagely Utilized
Grand mean		2.24		Averagely Utilized

The above shows that items 2, 6, 9, 13, and 14 much utilized as the electronic books resources utilized for research by business education students in college of education because they have mean value above 2.50 where as items 1, 3, 4, 5, 7, 8, 10, 11, 12, 15 and 16 are averagely utilized for research by business education students in college of education because they have mean value below 2.50.

Research Question Two: What is the extent of utilization of electronic journals Resources for research by business education students in Colleges of Education in South-South Nigeria?

Data collected with items 17 to 34 of the instrument were used to answer this research question.

Summary of results is presented on Table 2.

Table 2: Mean Ratings and Standard Deviation Scores of Respondents on the extent of Utilization of Electronic Journals for Research by Business Education Students in Colleges of Education

S/N	N	Mean	Std.	Remarks
17 SAGE journal materials	325	2.32	.97	Averagely Utilized
18 Scientific peer-review bulletin	325	2.27	.87	Averagely Utilized
19 Taylor & Francis Open Access Journal	325	2.00	.94	Averagely Utilized
20 African Journals Online	325	2.59	1.08	Much Utilized
21 Online Conference Proceedings	325	2.20	1.04	Averagely Utilized
22 Science Direct Open Access Journals	325	2.19	.84	Averagely Utilized
23 DOAJ (Directory of Open Access Journals)	325	1.99	1.05	Averagely Utilized
24 Bentham Science Publishing	325	2.06	1.01	Averagely Utilized
25 Digital institutional repository	325	2.22	.99	Averagely Utilized
26 Online Conference proceedings	325	2.39	1.01	Averagely Utilized
27 JSTOR Journals	325	2.07	1.01	Averagely Utilized
28 E-thesis/dissertation	325	2.16	.240	Averagely Utilized
29 E-magazine	325	2.41	1.07	Averagely Utilized
30 Online Database	325	2.45	1.04	Averagely Utilized
31 Open Access Portals of payment journals	325	1.88	.98	Averagely Utilized
32 Berlin Declaration on Open Access to Knowledge etc	325	1.96	.97	Averagely Utilized
33 Budapest Open Access Initiative,	325	1.78	.91	Averagely Utilized
34 Online public access catalogue (OPAC)	325	1.82	1.03	Averagely Utilized
Grand Mean	325	2.15		Averagely Utilized

The above shows that only item 20 much utilized as the electronic journal resources utilized for research by business education students in college of education because they have mean value above 2.50 where as items 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33 and 34 are averagely utilized for research by business education students in college of education because they have mean value below 2.50.

Result of Hypotheses

Research Hypothesis one:

H₀₁: Responses of male and female business education students in colleges of education in south-south Nigeria do not differ on the perceived extent of utilization of electronic book resources for research.

Data collected on perceived extent of utilization of electronic book resources for research were separated across gender and subjected to a t-test of difference between means of independent samples. Summary of the data analysis is presented on Table 3.

Table 3: t-test Results of Male and Female Business Education Students on the Extent of Utilization of Electronic Books Resources for Research

S/N	Gender	N	Mean	Std.	DF	t-cal	Alpha	P-Value	Decision
1	Male	85	2.50	1.15	323	1.553	0.05	.123	Not Significant
	Female	240	2.18	1.07					
2	Male	85	2.61	.93	323	1.189	0.05	.236	Not Significant
	Female	240	2.84	.97					
3	Male	85	2.24	.88	323	1.718	0.05	.088	Not Significant
	Female	240	1.92	1.03					
4	Male	85	2.25	1.03	323	3.498	0.05	.001	Significant
	Female	240	1.62	.82					
5	Male	85	2.28	1.14	323	2.120	0.05	.036	Significant
	Female	240	1.91	.96					
6	Male	85	2.32	1.01	323	1.149	0.05	.253	Not Significant
	Female	240	2.71	1.10					
7	Male	85	1.94	1.11	323	1.485	0.05	.140	Not Significant
	Female	240	1.60	.80					
8	Male	85	2.38	1.17	323	1.685	0.05	.094	Not Significant
	Female	240	1.99	1.06					
9	Male	85	2.77	1.05	323	1.318	0.05	.190	Not Significant
	Female	240	2.44	1.15					
10	Male	85	2.24	1.16	323	.283	0.05	.778	Not Significant
	Female	240	2.18	1.05					
11	Male	85	2.25	1.11	323	1.068	0.05	.288	Not Significant
	Female	240	2.16	1.05					
12	Male	85	2.12	1.02	323	.391	0.05	.697	Not Significant
	Female	240	2.10	.99					
13	Male	85	2.95	1.06	323	.275	0.05	.784	Not Significant
	Female	240	2.87	1.10					
14	Male	85	2.42	1.01	323	.671	0.05	.504	Not Significant
	Female	240	2.62	1.09					
15	Male	85	2.27	.96	323	.056	0.05	.2405	Not Significant
	Female	240	2.18	.94					
16	Male	85	2.25	1.10	323	1.708	0.05	.090	Not Significant
	Female	240	1.87	.89					

The result on Table 3 shows that fourteen out of sixteen items have their p-value within the range of .094 to .2405 which is greater than 0.05, indicating no significant difference between male and female business education students on extent of utilization of electronic book resources for research in college of education. While two items (4 and 5) only have their P-values within the range of .001 to .036 which are less than 0.05 level of significance, indicating that there is significant difference between male and female respondents on extent of utilization of electronic book resources for research in colleges of education. The grand total of P-value is 2.696 which greater than 0.05. This implies that there was no significant difference between the opinion of male and female business education students on the level of utilization of electronic books resources for research in colleges of Education in South-South, Nigeria

H0₂: There is no significance different in the mean rating of business education students in colleges of education in South-South Nigeria on the perceived extent of utilization of electronic journals resources for research based on ownership (Federal/State)

The t-test analysis of data collected to test the null hypothesis three is presented in Table 4

Table 4: t-test Results of State and Federal Business Education Students on the Extent of Utilization of Utilization of Electronic Journal Resources for Research

S/N	Variables	N	Mean	Std	DF	t-cal	Alpha	P-Value	Decision
17	Federal	196	2.22	.95	323	Mean	Std.	.148	Not Significant
	State	129	2.52	1.04					
18	Federal	196	2.15	.91	323	1.417	0.05	.159	Not Significant
	State	129	2.48	.86					
19	Federal	196	2.01	.96	323	-.341	0.05	.734	Not Significant
	State	129	2.16	1.04					
20	Federal	196	2.62	1.10	323	.429	0.05	.669	Not Significant
	State	129	2.59	1.11					
21	Federal	196	2.18	1.11	323	-.854	0.05	.701	Not Significant
	State	129	2.27	1.03					
22	Federal	196	2.12	.88	323	-.098	0.05	.924	Not Significant
	State	129	2.24	.84					
23	Federal	196	2.09	1.08	323	-.348	0.05	.728	Not Significant
	State	129	2.05	1.07					
24	Federal	196	2.03	1.00	323	.724	0.05	.063	Not Significant
	State	129	2.32	1.05					
25	Federal	196	2.20	1.01	323	-.681	0.05	.497	Not Significant
	State	129	2.27	1.03					
26	Federal	196	2.36	1.08	323	-1.509	0.05	.134	Not Significant
	State	129	2.57	1.03					
27	Federal	196	2.14	1.02	323	.230	0.05	.818	Not Significant
	State	129	2.05	1.00					
28	Federal	196	2.18	.99	323	-.184	0.05	.854	Not Significant
	State	129	2.17	.98					
29	Federal	196	2.38	1.08	323	-.089	0.05	.929	Not Significant
	State	129	2.48	1.08					
30	Federal	196	2.52	1.04	323	.370	0.05	.712	Not Significant
	State	129	2.39	1.07					
31	Federal	196	1.83	.94	323	.342	0.05	.733	Not Significant
	State	129	1.88	1.05					
32	Federal	196	1.91	.90	323	-.120	0.05	.909	Not Significant
	State	129	2.03	1.03					
33	Federal	196	1.72	.90	323	.040	0.05	.968	Not Significant
	State	129	1.84	.94					
34	Federal	196	1.77	1.00	323	-.518	0.05	.605	Not Significant
	State	129	1.89	1.06					

In Table 4 above shows that all the items are accepted. This is because their respective P- values are greater than alpha level of 0.05 at the degree of freedom of 323. The null hypothesis is not rejected, indicating that there is no significant different in the mean rating of business education students in Federal and State colleges of education on the perceived extent of utilization of electronic journals resources for research in colleges of education in South-South, Nigeria

Discussion of Findings

Extent of Utilization of Electronic Book Resources for Research by Business Education Students in Colleges of Education

The findings of this study revealed that Business Education students in Colleges of Education in South-South Nigeria utilized some electronic book resources for research purposes, but the overall extent of utilization was not high. Specifically, the findings showed that resources such as university libraries, Internet Archive, research databases, and online bookstores were utilized to a much extent, whereas resources including Amazon, Apple Books, Kobo Books, Project

Gutenberg, Kitabo, Libby, FBReader, open access repositories, Coursera, and EdX were utilized to an average extent. This implies that although Business Education students were aware of and accessed some electronic book resources, the majority of available electronic book platforms were not fully utilized for academic research activities. The limited utilization of electronic book resources observed in this study may be attributed to factors such as inadequate awareness of available electronic resources, limited digital literacy skills, poor Internet connectivity, unstable electricity supply, restricted access to subscription-based databases, and insufficient guidance on effective searching and retrieval of electronic information resources. This finding suggests that the availability of electronic book resources alone does not automatically translate into effective utilization; students require adequate training, institutional support, and improved digital infrastructure to maximize the benefits of these resources for research.

The finding agrees with Okocha (2020), who reported that although Nigerian university students demonstrated awareness of electronic books, frequent utilization remained relatively low, with many students only becoming aware of e-books through lecturers. Similarly, Danjuma and Oluwafemi (2018) found that the availability and utilization of open access resources among students in Nigerian private universities were low due to inadequate awareness, poor Internet connectivity, erratic power supply, and limited assistance from library personnel in accessing electronic resources. These findings support the present study by emphasizing that awareness, accessibility, and institutional support are important factors influencing students' utilization of electronic books. However, the finding contradicts the report of Tella et al. (2018), who found that undergraduate students generally had positive perceptions of electronic books and considered them useful for improving learning efficiency, completing academic tasks, and supporting research activities. Similarly, Khan, Bhatti, and Khan (2016) observed that electronic books had become essential components of academic library services, with students increasingly relying on them for research and academic improvement. The difference between these studies and the present finding may be attributed to variations in institutional facilities, students' exposure to electronic resources, availability of digital libraries, and differences in the technological environment of the institutions studied.

The finding also differs from Liasu and Bakrin (2022), who reported that many Nigerian students relied on electronic resources to improve academic performance and prepare for examinations, although they still experienced challenges related to Internet connectivity and power supply. The variation may be explained by the fact that the present study focused specifically on Business Education students in Colleges of Education, where access to advanced electronic resource platforms and research databases may be more limited compared with universities. The hypothesis tested revealed that there was no significant difference in the mean ratings of male and female Business Education students on the extent of utilization of electronic book resources for research. This finding indicates that gender did not influence students' perceptions regarding their utilization of electronic book resources. Both male and female students demonstrated similar levels of utilization, suggesting that the challenge of inadequate utilization of electronic book resources is a general issue affecting Business Education students rather than a gender-related problem. This finding agrees with Mussa (2018), who found that although students utilized Internet search engines for academic purposes, the frequency and depth of usage varied among students. The finding also supports studies that reported similar Internet usage patterns among male and female students, indicating that access, skills, and institutional support are more influential factors than gender in determining students' utilization of electronic resources.

Extent of Utilization of Electronic Journal Resources for Research by Business Education Students in Colleges of Education

The findings of the study revealed that Business Education students in Colleges of Education in South-South Nigeria utilized electronic journal resources for research to a low extent. Specifically, the findings showed that among the identified electronic journal resources, only African Journals Online (AJOL) was utilized to a much extent, while other resources such as SAGE journals, Scientific Peer-Review Bulletin, Taylor and Francis Open Access Journals, online conference proceedings, ScienceDirect Open Access Journals, Directory of Open Access Journals (DOAJ), Bentham Science Publishing, institutional repositories, JSTOR journals, electronic theses and dissertations, e-magazines, online databases, open access portals, the Berlin Declaration on Open Access to Knowledge, Budapest Open Access Initiative, and Online Public Access Catalogue (OPAC) were utilized to an average extent. The finding indicates that although electronic journal resources are increasingly available globally, Business Education students in Colleges of Education have not fully embraced these resources for research purposes. The low utilization may be associated with limited awareness of available electronic journal platforms, inadequate research skills, insufficient training in electronic database searching, poor Internet connectivity, irregular power supply, and limited institutional subscription to scholarly databases. Furthermore, some students may continue to depend on printed materials because they are more familiar with traditional sources of information.

The finding agrees with Aina (2018), who observed that despite the increasing availability of electronic resources in Nigerian tertiary institutions, students continue to experience difficulties in accessing and effectively utilizing them. Similarly, Ojedokun and Lumor (2017) reported that inadequate ICT skills and insufficient training often hinder students' effective utilization of electronic resources. The finding also supports Nweze (2020), who established that students who frequently utilized electronic resources demonstrated better research skills and improved academic performance compared with those who rarely used them. The finding is further supported by Okeke-Ezeanyanwu and Ogbughalu (2024), who found that postgraduate Business Education students in public universities in Anambra State utilized electronic libraries and search engines for research purposes to a low extent. This similarity suggests that challenges associated with electronic resource utilization cut across different levels of Business Education students in Nigerian tertiary institutions. However, the finding contradicts Cason and Scoyoc (2016), who reported that undergraduate students in an electronic library environment relied extensively on Internet-based resources and online academic platforms for their research activities. The finding also disagrees with Chirra and Madhusudhan (2019), who observed increased demand and usage of electronic journals among academic and research communities. Similarly, Aladeniyi (2017) noted that electronic journals were increasingly accepted by researchers because they provided faster access to current scholarly information. The differences may be attributed to variations in institutional resources, availability of electronic databases, students' research competencies, and technological advancement of the institutions involved.

The finding also contrasts with Shuling (2017), who reported that electronic information resources had become major components of university libraries and had transformed access to academic information globally. Nevertheless, the finding is consistent with Lefuna (2017), who noted that while electronic resources such as e-journals, online databases, institutional repositories, and OPAC were available in academic libraries, their effective utilization depended largely on users' skills, awareness, and access conditions. The hypothesis tested showed that there was no significant difference in the mean ratings of Business Education students in Federal and State Colleges of Education on the extent of utilization of electronic journal resources for research. This finding implies that the type of ownership of the institution did not significantly influence students' utilization of electronic journal resources. Students from both Federal and State Colleges of Education experienced similar patterns of utilization, suggesting that challenges associated with electronic journal usage are widespread across Colleges of Education in South-South Nigeria. The finding agrees with Oyekanmi (2017), who observed that although

Federal institutions often possess better infrastructure and research facilities, students' utilization of electronic resources depends largely on awareness, skills, and accessibility. Similarly, Adomi and Igun (2020) noted that State institutions often experience limitations in accessing digital resources due to funding constraints and infrastructural challenges. However, the absence of significant differences in the present study suggests that both Federal and State Colleges of Education may be facing similar challenges relating to electronic resource accessibility, digital literacy, and research support systems.

Overall, the findings highlight the need for Colleges of Education in South-South Nigeria to strengthen electronic library services, improve Internet and power infrastructure, organize regular digital literacy training, and provide adequate orientation on the effective use of electronic books and journals. Enhancing students' competencies in accessing and utilizing electronic resources will contribute significantly to improving research quality and academic productivity among Business Education students.

Conclusion

The study concluded that electronic book resources and electronic journal resources are important Internet-based scholarly resources that have the potential to enhance the quality and effectiveness of research activities among Business Education students in Colleges of Education in South-South Nigeria. However, the findings revealed that the extent of utilization of these resources by students was generally inadequate, particularly in relation to electronic journal resources. Although some electronic book platforms and journal sources were accessed by students, the overall utilization pattern indicates that many students have not fully exploited the opportunities provided by digital scholarly resources for academic research. The study further concluded that the limited utilization of electronic book and electronic journal resources may be associated with factors such as inadequate awareness, insufficient digital literacy skills, poor Internet connectivity, unstable electricity supply, limited access to subscribed databases, and inadequate institutional support. These challenges restrict students' ability to effectively search, evaluate, and apply current scholarly information in their research activities.

The findings also established that gender and institutional ownership (Federal and State Colleges of Education) did not significantly influence students' utilization of electronic book and electronic journal resources for research. This implies that the challenge of underutilization is not peculiar to male or female students or to a particular category of institution but represents a general concern among Business Education students in Colleges of Education in South-South Nigeria. Therefore, the study concluded that improving students' utilization of electronic book and electronic journal resources requires deliberate efforts from Colleges of Education through the provision of adequate digital infrastructure, improved Internet accessibility, regular training on information retrieval skills, and integration of electronic resource utilization into the Business Education curriculum. Enhancing students' competence in using these resources will strengthen their research capacity, improve academic productivity, and prepare them for effective participation in the technology-driven knowledge environment.

Implication of the Study

The findings of this study have significant implications for Business Education students, lecturers, college administrators, librarians, curriculum planners, and policymakers. The study revealed that the utilization of electronic book resources and electronic journal resources among Business Education students in Colleges of Education in South-South Nigeria was not at the desired level. This implies that students may not be taking full advantage of the wealth of current, relevant, and scholarly information available through digital platforms to improve the quality of their research activities. Limited utilization of these resources may negatively affect students' ability to conduct comprehensive literature reviews, access recent research findings, and develop evidence-based academic works.

For Business Education students, the findings imply the need for improved digital literacy and information retrieval competencies. Students must develop the ability to effectively search, evaluate, and utilize electronic scholarly resources because research in the contemporary academic environment increasingly depends on access to reliable digital information. Failure to acquire these skills may limit their academic performance, research productivity, and preparedness for technology-driven workplaces.

For lecturers and Business Education programme coordinators, the findings imply the need to provide continuous guidance and support on the effective use of electronic resources for academic research. Lecturers should incorporate electronic book and electronic journal resources into research-related courses, assignments, seminars, and project supervision to encourage students' regular engagement with these resources. For college administrators and librarians, the findings indicate the need to strengthen institutional support systems by improving Internet facilities, providing access to relevant electronic databases, expanding digital library services, and organizing training programmes on electronic resource utilization. Adequate investment in digital infrastructure will enhance students' access to scholarly materials and promote effective research practices.

For curriculum planners and policymakers, the findings imply that digital information literacy should be given greater attention in Business Education programmes. Policies that promote access to electronic scholarly resources, capacity building, and integration of technology-based learning strategies are necessary to prepare students for research demands in the digital era. Furthermore, the finding that gender and institutional ownership did not significantly influence students' utilization of electronic book and electronic journal resources implies that interventions should be broadly targeted at all Business Education students rather than focusing on specific groups. Consequently, improving accessibility, awareness, and competency in electronic resource utilization remains a collective responsibility of stakeholders in Colleges of Education.

Recommendations

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

1. Management of the colleges of education in conjunction with the Heads of Business Education programmes in colleges of education should implement comprehensive digital literacy programmes on use of electronic book resources for research by business education students.
2. Management of the colleges of education in conjunction with the Heads of Business Education programmes should organize digital research skills workshops on utilization of electronic journal resources for research by business education students in college of education.

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