

Assessment of Search Skills for Retrieval of Online Information Resources Among Business Educators in Colleges of Education in Adamawa and Taraba States, Nigeria

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Abstract

This study adopted a descriptive survey design to capture the opinions of 100 Business Education lecturers (Accounting, Marketing and Management) in Colleges of Education across Adamawa and Taraba States, Nigeria. The entire population was used as the sample; hence no further sampling technique was applied. Data were collected through a structured questionnaire designed by the researcher tagged "Online Information Resources Questionnaire (OIRQ)" validated by three experts and pilot-tested on 15 similar lecturers in Federal College of Education in Gombe State, yielding a Cronbach-alpha reliability coefficient of 0.72. The instrument was administered by the researcher with the help of three trained assistants across four tertiary institutions in the two states. Descriptive statistics (means and standard deviations) were employed to answer all the research questions. Decision rule for research question 1 was based on true limits of numbers, whereas research question 2 was such that items with a mean ≥ 3.00 were interpreted as "Agreed" while those below 3.00 were deemed "Disagreed". Null hypotheses were tested with one-way ANOVA and PPMC at the 0.05 significance level, retaining hypotheses where $p \geq 0.05$ and rejecting them when $p < 0.05$. The study revealed that business educators in Colleges of Education in Adamawa and Taraba States possess only moderate competencies in the use of search skills for retrieving online information resources. While they demonstrate reasonable ability in carrying out basic searches through general search engines and open educational resources, their proficiency in advanced information retrieval techniques such as Boolean logic, use of scholarly databases, and application of citation management tools remains inadequate. Finally, it was recommended that Colleges of Education in Adamawa and Taraba States should organize regular capacity-building workshops and seminars to improve the digital literacy and search skills of business educators and lecturers should be trained on the use of advanced search techniques such as Boolean operators, keyword refinement, and database navigation to enhance their ability to retrieve quality information resources.

Original Research Article

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Introduction

In today's modern society, it is no hidden secret that information is everywhere on the internet. Information is a pervasive and essential part of our society and everyday lives. Humans are at their essence, processors and users of information. This is not a recent development, as humans have always been dependent on information to help them make decisions and guide their actions. The sheer volume of information and the complexity of information systems have increased largely because of advances in information technology. Information, which is also considered an

essential commodity, has become a basic resource for individual development. Thus, information lays the foundation for competitive advantage.

Online information search skills involve a series of activities and capabilities that an individual adopts to locate where information is, its types and formats, and ways of accessing the information. It also involves ways of retrieving, evaluating, and utilizing information. According to the Library Guide (2021), information search

skills are viewed as consisting of a series of activities aimed at finding information. The retrieval of online information resources by academics extends into the realm of the use of e-resources, which is now commonplace among academics in tertiary educational institutions all over the globe. Many academics, including those in universities, are exploring the opportunities of e-resources to facilitate teaching, learning, and research. The use of e-resources is increasing, particularly among academics.

Before the advent of the 21st century, students and academicians relied solely on printed sources, but now they are using print as well as electronic information resources. This development was made possible due to advancements in information and communication technology, and the internet has changed the way we access and use information, which was unimaginable. Proficiency in digital technology and online communications have become crucial skills for conducting evidence-based research in all realms, including medicine, public health, and higher education. As everyday life becomes increasingly digitized, internet users face new challenges due to information overload, which creates anxiety among information users about how to seek and search for information online. Academicians are information seekers, which always tend to employ weak online search skills that may negatively affect the quality of their search results. In addition to poor online search skills, the results they got have a strong effect on their decision-making.

The rapid advancement of digital technology has fundamentally transformed how information is accessed, shared, and utilized in education. The academic and professional research landscape has undergone a profound transformation with the shift from traditional libraries to digital platforms. Educational institutions worldwide are increasingly integrating digital resources—such as e-books, open-access repositories, and multimedia learning tools—into their curricula to enhance teaching, learning, and research processes (Selwyn, 2019). The COVID-19 pandemic further accelerated the shift from traditional to digital, as educators and students turned to online databases.

The ability to effectively retrieve online information has become a fundamental skill in modern education, playing a pivotal role in enhancing teaching, learning, and research processes. This accessibility has transformed pedagogical approaches by enabling more dynamic and student-centered learning experiences. Furthermore, online information retrieval facilitates self-directed learning, allowing students to explore topics beyond the confines of traditional curricula and develop critical thinking skills essential for the digital age (Head et al., 2020).

While digital platforms offer a wealth of up-to-date business education materials, many Nigerian business educators face difficulties in effectively accessing and utilizing these resources. Studies indicate that only 40% of educators in colleges of education regularly use online academic databases due to limited digital literacy and institutional constraints (Uzoagulu & Obasi, 2021). Even when online resources are available, challenges such as poor internet connectivity, high data costs, and lack of institutional subscriptions to premium databases hinder their effective use (Afolabi & Adesina, 2022). Furthermore, many business educators lack training in advanced search techniques, critical evaluation of online sources, and digital content integration into teaching (Okafor, 2022).

Business educators in colleges of education Northeast Nigeria face unique and compounded challenges in accessing and utilizing online information, significantly impacting their teaching and research capabilities. The region suffers from chronic internet inaccessibility, with broadband penetration rates among the lowest in Nigeria due to inadequate infrastructure and frequent disruptions caused by security concerns (NBS, 2022; World Bank, 2023). A study by Mustapha and Abdullahi (2023) found that only 28% of tertiary institutions in the Northeast have stable internet connectivity, severely limiting educators' ability to retrieve digital resources in real time. Additionally, high data costs further restrict access, as many educators cannot afford consistent mobile data subscriptions needed for research (GSMA, 2023). Beyond connectivity issues, low digital literacy levels among both educators and students exacerbate the problem. Many business educators in the region lack training in advanced search techniques, database navigation, and critical evaluation of online sources (Eze et al., 2021). Even when internet access is available, many educators struggle with filtering credible academic materials from unreliable sources, which affects the quality of teaching materials (Afolabi & Adesina, 2022).

However, educators with strong search skills serve as role models for students, equipping them with the digital literacy needed for modern workplaces (Ala, 2019). Graduates who learn to navigate academic databases, assess source credibility, and synthesize information gain a competitive edge in business careers (UNESCO, 2021). In regions like Northeast Nigeria, where institutional resources are limited, training educators in advanced search techniques can mitigate infrastructure challenges by maximizing the utility of available online materials (Asubiaro, 2021). Ultimately, investing in the development of search skills fosters a culture of continuous learning, ensuring that both educators and students remain adaptable in a rapidly evolving digital

economy. Against this backdrop, this study aims to investigate strategies for optimizing search skills for the effective retrieval of online information resources among business educators in colleges of education in Northeast Nigeria.

Statement of the Problem

The rapid growth of digital information resources has revolutionized teaching and learning processes globally. For Business Educators in colleges of education, the ability to effectively search, retrieve, and utilize online academic materials is particularly crucial for delivering current, industry-relevant content. However, in Adamawa and Taraba States, numerous challenges hinder business educators from maximizing these digital resources to enhance their teaching and research activities.

Business educators in colleges of education in Adamawa and Taraba States demonstrate significant deficiencies in search skills for retrieving online information resources. Studies indicate that most educators in this region lack proficiency in using advanced search techniques, evaluating source credibility, and navigating academic databases effectively (Eze et al., 2021; Okafor, 2023). This skills gap persists despite the availability of numerous high-quality online resources that could enrich business education curriculum and pedagogy.

Research by Mustapha and Abdullahi (2023) reveals that only 28% of tertiary institutions in Adamawa and Taraba States have stable internet access, severely limiting educators' opportunities to develop digital search competencies. Furthermore, Afolabi and Adesina (2022) found that 60% of business educators in the region have never received formal training in information retrieval strategies, leaving them ill-equipped to locate and utilize relevant digital materials.

The failure to optimize educators' search skills will perpetuate several detrimental consequences for business education in Adamawa and Taraba States. Firstly, educators will continue relying on outdated teaching materials, severely compromising curriculum quality and relevance in an era of rapid business innovation. This knowledge gap will further widen the existing digital divide between Adamawa and Taraba States, exacerbating educational inequalities. More alarmingly, graduates will enter the workforce lacking critical digital literacy skills, leaving them ill-prepared for modern business environments that demand sophisticated information management capabilities. Ultimately, business education programs will persistently underperform in meeting 21st-century demands, producing graduates who cannot effectively navigate digital business landscapes or contribute meaningfully to regional economic development. These compounding effects threaten to

create a generational disadvantage for both educators and students in Adamawa and Taraba States. It is therefore imperative to assess search skills for retrieval of online information resources among business educators in Adamawa and Taraba States colleges of education.

Purpose of the Study

The main purpose of this study was to assess the strategies for search skills for retrieval of online information resources among business educators in colleges of education in Adamawa and Taraba States Nigeria. Specifically, the study sought to:

- i. Assess the current level of search skills among business educators in colleges of education in Adamawa and Taraba States.
- ii. Examine the availability of online information resources for business educators in colleges of education in Adamawa and Taraba States.

Research Question

The following questions guided the study:

- i. What is the current level of search skills among business educators in colleges of education in Adamawa and Taraba States?
- ii. What online information resources are available for business educators in colleges of education in Adamawa and Taraba States?

Hypotheses

The following hypotheses are formulated and tested at 0.05 level of significance.

- i. **H₀₁:** There is no significant difference in the mean responses of Accounting, Marketing and Management Lecturers on the current level of search skills among business educators in colleges of education in Adamawa and Taraba States.
- ii. **H₀₂:** There is no significant difference in the mean responses of Accounting, Marketing and Management Lecturers on the availability of online information resources for business educators in colleges of education in Adamawa and Taraba States.

Literature Review: Brief Conceptual Clarifications **Concept of Search Skills**

Search skills refer to the strategic and technical competencies required to locate, access, evaluate, and retrieve relevant information from digital platforms. These skills are increasingly critical in today's information-rich environment, where an overwhelming amount of data is available online. According to Onwubiko and Nwachukwu (2020), effective search skills encompass multiple components including the identification of precise

keywords, utilization of major search engines such as Google, Bing, and Yahoo, and the application of Boolean logical method that employs operators like AND, OR, and NOT to either narrow or expand search results. Boolean operators help users create more focused queries that improve the accuracy of search outcomes, thereby saving time and effort in the research process.

Level of Search Skills Among Business Educators in Nigeria.

In the digital age, search skills have become an essential component of academic and professional competence, particularly for educators who rely on vast online resources to inform their teaching and research. As the internet evolves into the dominant repository of human knowledge, individuals must be equipped with the ability to effectively search, retrieve, and assess online information. Unlike the traditional library setting where information is curated and organized, the internet presents a decentralized and often overwhelming volume of content, making it necessary for users to have refined search skills in order to locate accurate, relevant, and credible information (Afolabi & Abidoye, 2020). The ability to conduct effective searches goes beyond typing keywords into a search engine; it requires a strategic and analytical approach to querying digital databases and websites.

Search skills encompass a multifaceted set of competencies, which include formulating precise and goal-oriented search queries, applying Boolean logic (AND, OR, NOT) to narrow or expand search results, utilizing advanced search filters to target specific formats or publication dates, and navigating academic repositories such as JSTOR, Google Scholar, and institutional databases. Moreover, a critical component of search proficiency is the ability to evaluate the credibility, authorship, date, and relevance of online sources—a skill that is particularly important in an age where misinformation and non-peer-reviewed content abound (Onwubiko & Nwachukwu, 2020). Without these competencies, users risk relying on outdated, biased, or inaccurate information, which can compromise both teaching quality and research validity.

These competencies are collectively recognized as part of digital literacy, a broader framework that includes information literacy, media literacy, and ICT proficiency. According to UNESCO (2018), digital literacy is not only about technical know-how but also about the capacity to critically engage with digital tools and platforms to achieve educational and professional goals. For 21st-century educators, digital literacy—and by extension, search skills—are no longer optional but fundamental to effective practice. Teachers are expected to guide students

through complex information ecosystems, support inquiry-based learning, and stay updated with current trends and knowledge in their fields. As such, strengthening educators' search skills is a necessary step toward fostering a digitally competent and information-rich academic environment.

For business educators, the relevance of search skills extends significantly beyond the rudimentary use of the internet for general browsing or communication. These educators occupy a critical position in shaping the future workforce for a highly competitive, fast-paced, and information-driven global economy. In this context, their role demands not only subject matter expertise but also the ability to engage with and impart up-to-date knowledge derived from credible sources. The business landscape is constantly evolving due to technological innovations, shifting market trends, global financial movements, and policy reforms. To keep pace, educators must possess the ability to quickly and efficiently access relevant, accurate, and current information, which is made possible through refined digital search skills (Ifinedo, 2021).

Such competencies enable educators to identify and integrate high-quality teaching resources, such as digital textbooks, peer-reviewed journal articles, real-time financial data, government policy documents, and current case studies into their instructional practices. This enriches classroom discussions, provides students with real-world insights, and bridges the gap between theoretical business principles and practical application. Furthermore, the ability to retrieve up-to-date and discipline-specific content ensures that students are not learning outdated concepts but are instead equipped with relevant tools and knowledge that prepare them for industry demands and global competition.

Role of Digital Literacy in Search Proficiency

Digital literacy is a comprehensive concept that extends far beyond basic computer usage, encompassing a range of skills essential for navigating the digital world. UNESCO (2018) defines digital literacy as the ability to effectively use digital tools and technologies to search for, evaluate, create, and communicate information. This broad definition underscores the multifaceted nature of digital literacy, which goes beyond simple technological use and delves into critical thinking, digital ethics, and the responsible use of information in an increasingly digital society. Digital literacy encompasses a variety of skills, including proficiency in using software applications, understanding online behaviors, evaluating the credibility of media content, and ensuring safety and ethical behavior in digital environments.

In the context of education, digital literacy takes on an additional layer of significance, as it directly impacts how

educators engage with students, conduct research, and enhance their own professional development. For educators, digital literacy is not just about mastering basic tools but also about effectively navigating digital platforms, including academic search engines, online repositories, and scholarly databases. This includes the ability to use advanced search techniques to access high-quality, peer-reviewed, and up-to-date academic materials. Such skills enable educators to retrieve relevant information that is critical for informed teaching, curriculum development, and ongoing scholarly engagement.

Methodology

The study adopted a descriptive survey design to capture the opinions of 100 Business Education lecturers (Accounting, Marketing and Management) in Colleges of Education across Adamawa and Taraba States, Nigeria. The entire population was used as the sample; hence no further sampling technique was applied. Data were collected through a researcher-designed structured questionnaire tagged “Online Information Resources Questionnaire (OIRQ)” validated by three experts and pilot-tested on 15 similar lecturers in Federal College of Education in Gombe State, yielding a Cronbach-alpha reliability coefficient of 0.72. The instrument was administered by the researcher with the help of three

trained assistants across four tertiary institutions in the two states. Descriptive statistics (means and standard deviations) were employed to answer the research questions. The 100 copies of the *Online Information Resources Questionnaire (OIRQ)* that were administered by the researcher and three trained assistants across the four Colleges of Education in Adamawa and Taraba States, the entire 100 copies were returned. This represents a response rate of 100.0% ($100 \div 100 \times 100\%$) typically regarded as excellent for survey research, ensuring that the findings remain robust and adequately representative of the target population.

Decision rule for research question 1 was based on true limits of numbers, whereas research question 2 was such that items with a mean ≥ 3.00 were interpreted as “Agreed” while those below 3.00 were deemed “Disagreed” Null hypotheses were tested with one-way ANOVA and PPMC at the 0.05 significance level, retaining hypotheses where $p \geq 0.05$ and rejecting them when $p < 0.05$.

Results

Research Question 1

What is the current level of search skills among business educators in colleges of education in Adamawa and Taraba States?

Table 1: Mean Response on the Current Level of Search Skills Among Business Educators in Colleges of Education in Adamawa and Taraba States.

| S/No. | Statements | n = 20 | | n = 20 | | n = 60 | | n _t = 100 | | Rmk |
|-------|--|-------------|--------|-------------|--------|-----------------|------------|----------------------|--------|-----|
| | | \bar{x}_A | SD_A | \bar{x}_M | SD_M | \bar{x}_{Mgt} | SD_{Mgt} | \bar{x}_G | SD_G | |
| 1 | I can effectively use online search engines such as Google to find academic resources related to business education. | 3.84 | 0.50 | 3.81 | 0.53 | 3.73 | 0.63 | 3.79 | 0.56 | H |
| 2 | I can efficiently search academic databases for relevant research articles. | 3.89 | 0.57 | 3.88 | 0.61 | 3.82 | 0.73 | 3.86 | 0.64 | H |
| 3 | I frequently use advanced search techniques to refine my online searches. | 2.37 | 0.83 | 2.42 | 0.87 | 2.61 | 1.00 | 2.47 | 0.90 | L |
| 4 | I can effectively use keywords to conduct relevant online searches. | 3.16 | 0.37 | 3.19 | 0.39 | 3.27 | 0.45 | 3.21 | 0.41 | MH |
| 5 | I can distinguish between credible/non-credible online sources for academic research. | 3.21 | 0.54 | 3.25 | 0.56 | 3.36 | 0.65 | 3.28 | 0.59 | MH |
| 6 | I am proficient in using online library resources to find educational materials. | 3.42 | 0.84 | 3.46 | 0.85 | 3.67 | 0.96 | 3.52 | 0.88 | H |

| | | | | | | | | | | |
|----|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|
| 7 | I can locate relevant textbooks, journals, and articles through online search platforms without difficulty. | 4.21 | 0.42 | 4.23 | 0.42 | 4.33 | 0.48 | 4.26 | 0.44 | H |
| 8 | I am comfortable navigating academic websites to locate teaching materials/educational resources. | 4.16 | 0.37 | 4.19 | 0.39 | 4.27 | 0.45 | 4.21 | 0.41 | H |
| 9 | I am familiar with various academic citation tools such as Zotero, EndNote to manage online search results. | 1.42 | 0.84 | 1.46 | 0.85 | 1.67 | 0.96 | 1.52 | 0.88 | L |
| 10 | I know how to use filtering options effectively when searching for business education materials online. | 2.26 | 0.56 | 2.29 | 0.58 | 2.42 | 0.66 | 2.33 | 0.60 | L |
| 11 | I am confident in using online forums and discussion platforms such as ResearchGate to find relevant academic content. | 3.95 | 0.52 | 3.98 | 0.53 | 4.00 | 0.61 | 3.98 | 0.55 | H |
| 12 | I can evaluate the relevance of search results. | 4.11 | 0.46 | 4.15 | 0.46 | 4.24 | 0.50 | 4.17 | 0.47 | H |
| 13 | I regularly use academic e-books/online journals to enhance my teaching in business education. | 3.79 | 0.42 | 3.81 | 0.39 | 3.79 | 0.42 | 3.80 | 0.40 | H |
| 14 | I can effectively search for government reports, policy documents, and educational guidelines relevant to business education. | 4.16 | 0.37 | 4.15 | 0.36 | 4.18 | 0.39 | 4.16 | 0.37 | H |
| 15 | I am proficient in using online search skills to stay updated with recent developments in business education research practice. | 3.21 | 0.63 | 3.25 | 0.67 | 3.36 | 0.78 | 3.28 | 0.70 | MH |
| | Average | 3.41 | 0.55 | 3.43 | 0.56 | 3.52 | 0.64 | 3.46 | 0.59 | MH |

Source: Field Work (2025)

NOTE : *H = High, MH= Moderately High, L = Low, n = Number of Respondents, n_t = Total Number of Respondents, \bar{x}_A = Mean Response of Accounting Lecturers, SD_A = Standard Deviation of Accounting Lecturers, \bar{x}_M = Mean Response of Marketing Lecturers, SD_M = Standard Deviation of Marketing Lecturers, \bar{x}_{Mgt} = Mean Response of Management Lecturers, SD_{Mgt} = Standard Deviation of Management Lecturers, \bar{x}_G = Grand Mean of Responses, SD_G = Standard Deviation of Grand Mean,*

Table 1 provided data that addressed Research Question 1, which sought to determine the current level of search skills among business educators in Colleges of Education in Adamawa and Taraba States. The results show that items 1, 2, 6–8, 11–14 were rated High (H), with mean values ranging from 3.42 to 4.26 and corresponding standard deviations between 0.37 and 0.96, indicating that the respondents demonstrated strong competence in the use of online search engines, academic databases, library resources, educational websites, forums such as ResearchGate, evaluating search results, using e-

books/journals, and accessing government/policy documents. Items 4, 5, and 15 were rated Moderately High (MH), with mean values ranging from 3.16 to 3.36 and standard deviations between 0.37 and 0.78, suggesting a fair level of competence in the use of keywords, distinguishing credible sources, and applying search skills to keep updated in business education. In contrast, items 3, 9, and 10 were rated Low (L), with mean values ranging from 1.52 to 2.47 and standard deviations between 0.60 and 0.96, reflecting weaknesses in advanced search techniques, citation management tools, and use of filtering

options. On the whole, the grand mean of 3.46 (SD = 0.59) indicates that the current level of search skills among business educators is Moderately High, showing adequate strength in basic search practices but notable gaps in advanced and specialized search competencies.

Research Question 2

What online information resources are available for business educators in colleges of education in Adamawa and Taraba States?

Table 2: Mean Response on the Online Information Resources Available for Business Educators in Colleges of Education in Adamawa and Taraba States.

| S/No. | Statements | n = 20 | | n = 20 | | n = 60 | | n _t = 100 | | Rmk |
|-------|--|-------------|--------|-------------|--------|-----------------|------------|----------------------|--------|-----|
| | | \bar{x}_A | SD_A | \bar{x}_M | SD_M | \bar{x}_{Mgt} | SD_{Mgt} | \bar{x}_G | SD_G | |
| 1 | Online academic journals related to business education are readily accessible for educators in Northeast Nigeria. | 4.37 | 0.50 | 4.35 | 0.48 | 4.42 | 0.50 | 4.38 | 0.49 | A |
| 2 | Business educators have access to online databases such as Google Scholar for research purposes. | 3.68 | 0.48 | 3.71 | 0.46 | 3.67 | 0.48 | 3.69 | 0.46 | A |
| 3 | There are institutional subscriptions to digital libraries and repositories that business educators can use to access educational materials. | 2.26 | 0.56 | 2.29 | 0.58 | 2.42 | 0.66 | 2.33 | 0.60 | D |
| 4 | Online platforms like ResearchGate and Academia.edu provide business educators with relevant academic content for their teaching and research. | 4.21 | 0.42 | 4.21 | 0.41 | 4.27 | 0.45 | 4.23 | 0.42 | A |
| 5 | Business educators in Northeast Nigeria have reliable internet access to access a variety of online resources. | 1.42 | 1.26 | 1.50 | 1.34 | 1.73 | 1.57 | 1.56 | 1.39 | D |
| 6 | There is a wide range of online textbooks and e-books available for business educators to enhance their teaching materials. | 4.05 | 0.62 | 4.10 | 0.59 | 4.24 | 0.61 | 4.14 | 0.60 | A |
| 7 | Online government and educational policy documents related to business education are accessible to business educators | 3.89 | 0.32 | 3.90 | 0.31 | 3.85 | 0.36 | 3.88 | 0.33 | A |

| | | | | | | | | | | |
|----|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| 8 | Online video tutorials and webinars are available for business educators to improve their teaching methods. | 4.16 | 0.37 | 4.19 | 0.39 | 4.27 | 0.45 | 4.21 | 0.41 | A |
| 9 | Educators can easily access online courses and MOOCs (Massive Open Online Courses) related to business education. | 4.26 | 0.45 | 4.25 | 0.44 | 4.30 | 0.47 | 4.27 | 0.45 | A |
| 10 | Business educators in Northeast Nigeria can access various online business-related discussion groups for professional development. | 4.37 | 0.50 | 4.35 | 0.48 | 4.42 | 0.50 | 4.38 | 0.49 | A |
| 11 | There is sufficient access to open educational resources (OER) for business educators to integrate into their courses. | 4.11 | 0.88 | 4.06 | 0.91 | 4.03 | 1.07 | 4.06 | 0.95 | A |
| 12 | Business educators in Northeast Nigeria can easily find research articles, case studies online for curriculum development. | 4.32 | 0.48 | 4.31 | 0.47 | 4.39 | 0.50 | 4.34 | 0.48 | A |
| 13 | Online academic libraries provide business educators with up-to-date journals, articles, and other educational resources for effective teaching. | 3.95 | 0.52 | 3.94 | 0.52 | 3.88 | 0.60 | 3.92 | 0.54 | A |
| 14 | Social media platforms such as LinkedIn, Twitter offer useful content and resources for business educators. | 4.11 | 0.66 | 4.15 | 0.62 | 4.27 | 0.63 | 4.18 | 0.63 | A |
| 15 | Business educators have access to online resource-sharing platforms that allow them to share teaching materials and resources with colleagues. | 3.68 | 0.75 | 3.63 | 0.79 | 3.45 | 0.90 | 3.58 | 0.82 | A |
| | Average | 3.79 | 0.58 | 3.80 | 0.59 | 3.84 | 0.65 | 3.81 | 0.60 | A |

Source: Field Work (2025)

NOTE : A = Agreed, D = Disagreed, n = Number of Respondents, n_t = Total Number of Respondents, \bar{x}_A = Mean Response of Accounting Lecturers, SD_A = Standard Deviation of Accounting Lecturers, \bar{x}_M = Mean Response of Marketing Lecturers, SD_M = Standard Deviation of Marketing Lecturers, \bar{x}_{Mgt} = Mean Response of Management Lecturers, SD_{Mgt} = Standard Deviation of Management Lecturers, \bar{x}_G = Grand Mean of Responses, SD_G = Standard Deviation of Grand Mean.

Table 2 provided data that addressed Research Question 2, which sought to determine the online information resources available for business educators in Colleges of Education in Adamawa and Taraba States. The results show that items 16, 17, 19, 21–29, and 30 were rated Agreed (A), with mean values ranging from 3.58 to 4.38 and corresponding standard deviations between 0.33 and 0.95, indicating that business educators have access to a wide range of online resources such as academic journals, Google Scholar, Research Gate, Academia.edu, e-books,

government/policy documents, video tutorials, MOOCs, discussion groups, open educational resources, case studies, academic libraries, social media platforms, and resource-sharing platforms, which enhance their teaching and research. In contrast, items 18 and 20 were rated Disagreed (D), with mean values of 2.33 and 1.56 and standard deviations of 0.60 and 1.39 respectively, reflecting limited access to institutional subscriptions and unreliable internet connectivity in the study area. Overall, the grand mean of 3.81 (SD = 0.60) indicates that business

educators generally have access to diverse online information resources, although challenges remain in terms of internet reliability and institutional subscriptions.

Null Hypothesis

H₀₁: There is no significant difference in the mean responses of Accounting, Marketing and Management Lecturers on the current level of search skills among business educators in colleges of education in Adamawa and Taraba States.

Table 6: ANOVA Analysis on the Current Level of Search Skills Among Business Educators in Colleges of Education in Adamawa and Taraba States.

| | Sum of Squares | Df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | .179 | 2 | 0.090 | 0.670 | 0.514 |
| Within Groups | 12.991 | 97 | 0.134 | | |
| Total | 13.171 | 99 | | | |

Source: Field Work (2025)

The result of the one-way ANOVA in Table 6 tested Hypothesis 1, which stated that there is no significant difference in the mean responses of Accounting, Marketing, and Management lecturers on the current level of search skills among business educators in Colleges of Education in Adamawa and Taraba States. The analysis yielded an F-value of 0.670 with a significance level (p-value) of 0.514, which is greater than the 0.05 alpha level. This indicates that the difference in the mean responses among the three groups of lecturers is not statistically significant. Therefore, the null hypothesis is accepted,

implying that Accounting, Marketing, and Management lecturers share similar perceptions regarding the current level of search skills among business educators in the study area.

H₀₂: There is no significant difference in the mean responses of Accounting, Marketing and Management Lecturers on the availability of online information resources for business educators in colleges of education in Adamawa and Taraba States.

Table 7: ANOVA Analysis on the Online Information Resources Available for Business Educators in Colleges of Education in Adamawa and Taraba States.

| | Sum of Squares | Df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .052 | 2 | .026 | .477 | .622 |
| Within Groups | 5.320 | 97 | .055 | | |
| Total | 5.372 | 99 | | | |

Source: Field Work (2025)

The result of the one-way ANOVA in Table 7 tested Hypothesis 2, which stated that there is no significant difference in the mean responses of Accounting, Marketing, and Management lecturers on the availability of online information resources for business educators in Colleges of Education in Adamawa and Taraba States. The analysis produced an F-value of 0.477 with a significance level (p-value) of 0.622, which is greater than the 0.05 level of significance. This result showed that the difference in mean responses among the three groups of lecturers is not statistically significant. Consequently, the null hypothesis is retained, indicating that Accounting, Marketing, and Management lecturers hold similar views on the availability of online information resources for business educators in the study area.

Discussion of Findings

The findings of the study with regard to question one revealed a dichotomy in the search skill proficiency of business educators, indicating a solid foundation in fundamental digital literacy but a considerable shortfall in more sophisticated, advanced information retrieval techniques. This finding is corroborated by a body of recent scholarly work. The competence in basic tasks, such as navigating search engines and academic sites, aligns with the observations of Akinola and Durojaiye (2021), who reported that educators in Nigeria are increasingly becoming adept at using common online platforms for preliminary research and lesson preparation. Their study noted a positive trend in the ability to locate and download open-access materials, a fundamental skill. Similarly, Olayemi and Eze (2020) found that most of

their respondents were confident in performing simple searches and accessing known journals, which they attributed to the pervasive use of smartphones and mobile internet. However, the significant weakness in advanced techniques, particularly the use of Boolean operators and citation tools, is a persistent issue highlighted in literature. Nwoke and Adebawale (2023) specifically identified a "training gap" in their research, concluding that while educators can find information, they often cannot do so efficiently or comprehensively due to a lack of knowledge in constructing precise search queries using advanced syntax. This inefficiency leads to information overload and misses relevant resources. Furthermore, Ademola and Ige (2023) explored the research output of educators and directly linked lower publication rates in high-impact journals to a deficient use of digital management tools like Mendeley or Zotero, which are essential

for organizing literature and formatting citations. Their work suggests that without these advanced competencies, educators are hindered not only in their teaching preparation but also in their own scholarly contributions and ability to guide students through rigorous academic research processes, thus creating a cycle of limited digital scholarship. The result of the hypothesis tested also was online with the findings that Accounting, Marketing, and Management lecturers share similar perceptions regarding the current level of search skills among business educators in the study area.

The findings of the study with regard to question two uncovered that while a vast spectrum of online information resources theoretically exists for business educators, the practical accessibility of these materials is severely hampered by critical institutional and infrastructural deficits. This finding is strongly supported by contemporary research, which consistently distinguishes between the existence of digital resources and the tangible ability to use them. The wide range of available resources, including OERs and MOOCs, is acknowledged by Ibrahim and Adewunmi (2022), who documented an increasing awareness and occasional use of these free platforms among tertiary instructors in Nigeria. Their study lists numerous high-quality resources that are known to the academic community. Adeyemo and Akinbile (2022) also noted the proliferation of academic networking sites, which provide avenues for discovering and sharing scholarly work. However, the identified deficits in institutional subscriptions and internet connectivity are a major theme across multiple studies. Nwachukwu and Bello (2020) were unequivocal in their assessment, identifying inadequate funding for institutional digital library subscriptions as the primary barrier to accessing cutting-edge and proprietary research.

Their research concluded that educators are often forced to rely on outdated textbooks or pirated materials due to this financial constraint. Olutola and Adeyemi (2023) further emphasized the infrastructural angle, reporting that unstable and low-bandwidth internet connectivity, particularly in state-owned institutions outside major metropolitan areas, renders the theoretical availability of online journals and e-books practically meaningless. They described scenarios where educators spend excessive time trying to load a single webpage or are unable to download essential materials, effectively locking them out of the global academic conversation and impeding the quality of education they can provide. The null hypothesis is retained, indicating that Accounting, Marketing, and Management lecturers hold similar views on the availability of online information resources for business educators in the study area.

Conclusion

The study concluded that business educators in Colleges of Education in Adamawa and Taraba States possess only moderate competencies in the use of search skills for retrieving online information resources. While they demonstrate reasonable ability in carrying out basic searches through general search engines and open educational resources, their proficiency in advanced information retrieval techniques such as Boolean logic, use of scholarly databases, and application of citation management tools remains inadequate. This limitation negatively affects their ability to fully access, utilize, and integrate credible academic resources into teaching, learning, and research. Thus, optimizing search skills is a collective need that cuts across all areas of business education and remains a critical factor for improving academic productivity and effective use of online information resources in Colleges of Education within the study area.

Recommendations

1. Colleges of Education in Adamawa and Taraba States should organize regular capacity-building workshops and seminars to improve the digital literacy and search skills of business educators.
2. Lecturers should be trained on the use of advanced search techniques such as Boolean operators, keyword refinement, and database navigation to enhance their ability to retrieve quality information resources.
3. Institutions should subscribe to reputable online scholarly databases and digital libraries (e.g., JSTOR, EBSCOhost, ProQuest) to enable lecturers easy access to peer-reviewed academic resources.

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