

USE OF WEB-BASED RESOURCES FOR IMPROVED RESEARCH AMONG LECTURERS IN THE FACULTY OF EDUCATION, TARABA STATE UNIVERSITY, JALINGO

By

TAMA T.A TIMOKO CLN

and

DR. ISRAEL HABIBU IDRIS CLN

Abstract

This study investigates the utilization of web-based resources and services for Enhancing Research Productivity among Lecturers in the Faculty of Education at Taraba State University, Jalingo. A descriptive survey Research Design was employed, and a stratified Random Sampling technique was used to select respondents. Data collection was conducted using a structured Questionnaire, and the collected data were analyzed using descriptive and Inferential Statistical methods. The findings revealed that while a significant proportion of lecturers were aware of web-based resources, only a limited percentage incorporated them regularly into their teaching and research activities. The study identified a strong positive correlation ($r = 0.75$, $p < 0.001$) between the frequency of web-based resource usage and improvement in research practices, with digital engagement emerging as a key determinant. Major challenges affecting adoption included unstable internet access (67%), inadequate digital proficiency (42%), and institutional constraints (38%). The results underscore the transformative potential of web-based resources in advancing academic research, particularly in resource-constrained environments. The study recommends that the university should strengthen internet infrastructure, implement continuous digital literacy training, and formulate policies that encourage the effective use of web-based educational services. These measures will foster a conducive learning and research environment, ultimately enhancing lecturers' research capabilities and professional development.

Keywords: Web-based resources, digital literacy, research productivity, online academic tools, faculty development, higher education in Nigeria

Introduction

In recent years, the use of web-based resources has become a pivotal strategy for enhancing research productivity and academic performance among educators, particularly in

higher education institutions in developing countries. These resources including e-books, academic journals, online databases, and digital libraries offer a wealth of information that can significantly improve the quality and efficiency of research and teaching. The integration of these tools into the academic routines of lecturers is essential to strengthening their professional development and enhancing the research output of universities. For institutions like Taraba State University, Jalingo, web-based services offer a promising opportunity to bridge gaps in information access and academic engagement (Wiley & Hilton, 2018).

Research in higher education increasingly demands more than foundational knowledge and teaching proficiency; it also requires lecturers to stay current with evolving scholarship, conduct in-depth literature reviews, and collaborate across digital academic platforms. Web-based resources are central to enabling this transformation. The Faculty of Education at Taraba State University is part of this shift toward digital research tools, yet significant challenges persist in fully integrating these resources into everyday academic practice. Lecturers in the faculty often face obstacles such as inadequate internet infrastructure, limited digital research competencies, and insufficient institutional support all of which hinder their ability to fully leverage web-based resources for improved research (Okonkwo & Ndubuisi, 2020).

Globally, the use of web-based tools in academia is recognized as a catalyst for increasing research effectiveness and academic output. Universities that have successfully embedded digital resource use into their scholarly ecosystems benefit from greater access to cutting-edge information, improved collaborative networks, and faster dissemination of findings. Platforms such as Google Scholar, JSTOR, and ResearchGate have become standard in academic research and have been shown to boost research efficiency and scholarly visibility (Davis, 1989). However, in resource-constrained environments such as Nigeria, infrastructural limitations and lack of technical training have limited the full adoption of these tools (Czerniewicz et al., 2017).

Within the Nigerian context, while awareness of digital tools is increasing among academic staff, their actual utilization for research remains modest due to infrastructural and capacity-based constraints. Okojie (2020) observes that universities across the country face

systemic hurdles in embracing technology for academic advancement particularly the lack of enabling policies, internet access, and targeted training. At Taraba State University, lecturers' engagement with web-based resources for research purposes remains sporadic and heavily dependent on personal initiative (Ajayi & Ojo, 2019).

This study investigates the extent to which lecturers in the Faculty of Education at Taraba State University utilize web-based resources for research purposes. Specifically, it assesses their awareness of such resources, the frequency of their usage, and the impact of web-based tools on their research performance. The study also explores the barriers to effective integration of these resources and proposes actionable strategies for improvement. The ultimate goal is to provide evidence-based insights that can guide university management in fostering a supportive digital research culture, thereby enhancing the institution's overall academic productivity.

Problem Statement

Despite the increasing global emphasis on the use of web-based resources to enhance academic and research productivity, many lecturers in higher education institutions particularly in developing countries like Nigeria face persistent challenges in accessing and effectively utilizing these digital tools. At Taraba State University, Jalingo, lecturers in the Faculty of Education encounter infrastructural, technological, and institutional barriers that limit their ability to fully engage with web-based resources for improving research output and academic performance.

Although awareness of digital resources such as online journals, databases, and research repositories is gradually increasing, the consistent integration of these tools into daily research practices remains limited. One of the major obstacles is inadequate and unreliable internet connectivity, which impedes lecturers' ability to consistently access relevant academic materials online. Additionally, many lecturers lack the digital research skills required to navigate, evaluate, and apply web-based resources effectively. This deficiency hampers their ability to conduct literature reviews, keep up with global research trends, and publish in reputable academic outlets.

Moreover, the absence of strong institutional support such as access to modern digital infrastructure, regular training in digital literacy, and strategic policies promoting the use of online resources further compound the problem. These limitations not only reduce the potential of web-based tools to improve individual research performance but also weaken the university's overall academic competitiveness.

Given these challenges, this study seeks to examine the extent to which web-based resources are being used by lecturers in the Faculty of Education at Taraba State University to support and enhance their research activities. The study also aims to identify key barriers to effective usage and propose solutions that can foster a more robust and digitally empowered research culture within the university.

Research Questions

1. To what extent are lecturers in the Faculty of Education at Taraba State University aware of available web-based resources and services?
2. What is the frequency of web-based resource utilization among lecturers in the Faculty of Education, and how does it vary across different academic departments?
3. How do web-based resources and services impact the literacy skills of lecturers in the Faculty of Education at Taraba State University?
4. What are the major challenges lecturers face in accessing and utilizing web-based resources for improving their literacy skills?
5. What institutional support mechanisms exist, or are lacking, that influence the effective use of web-based resources by lecturers in the Faculty of Education?
6. How do lecturers perceive the potential of web-based resources in enhancing their research and teaching effectiveness?

Literature Review

Conceptual framework

Web-based resources such as e-books, open-access journals, online databases, and educational platforms have become indispensable in academic settings, providing lecturers with access to vast amounts of knowledge. These resources offer an efficient means of staying current in their fields, improving both teaching and research practices. Web-based resources support the development of critical literacy skills by providing easy access to scholarly materials, enabling lecturers to better navigate complex academic content, analyze information, and apply it to their teaching (Kirkwood & Price, 2014). The integration of these tools into everyday academic practice not only improves lecturers' information literacy but also fosters independent learning and collaborative research (Conole, 2013).

Digital literacy encompasses the skills needed to effectively locate, assess, and use information through digital technologies. For university lecturers, these competencies are essential for leveraging web-based resources in research activities. Key digital literacy skills include advanced search techniques, data management, use of citation tools, and collaboration on academic networks (JISC, 2015). Inadequate digital literacy among lecturers in many developing countries, including Nigeria, limits their ability to harness the benefits of web-based research tools (Jenkins, 2016). Thus, improving digital competencies is a prerequisite for optimizing research outcomes and academic visibility.

While web-based resources offer substantial benefits for academic research, lecturers in Nigerian universities face multiple barriers to effective usage. These challenges include unreliable internet access, power outages, inadequate digital devices, and lack of training opportunities (Akpan & Effiom, 2020). In many institutions, access to paid academic databases is also limited due to financial constraints. Furthermore, the absence of strategic institutional policies and support mechanisms continues to hinder the integration of web-based tools into academic workflows. Ezeani et al. (2020) highlight that the combination of technical limitations and skill deficits results in underutilization of digital resources in Nigerian higher education.

Web-based resources have the potential to significantly improve research efficiency and output. They facilitate faster literature discovery, enable global collaboration, and provide

platforms for publishing and disseminating scholarly work. Tools such as Google Scholar, JSTOR, Academia.edu, and ResearchGate empower lecturers to access cutting-edge research, share findings, and receive feedback from international peers. Mtega et al. (2020) emphasize that such platforms support knowledge creation by reducing time spent on manual searches and promoting interdisciplinary inquiry. Nonetheless, the impact is moderated by institutional readiness and individual digital skills (Mokhtar & Kamaruddin, 2017).

The successful integration of web-based resources into academic research depends heavily on institutional support. Universities that invest in reliable internet connectivity, provide access to key databases, and offer structured training for staff report higher levels of research output and digital engagement (Tella et al., 2019). Institutional policies that prioritize the use of digital research tools such as incorporating them into performance evaluations or funding research activities further promote a culture of digital scholarship. Ajayi et al. (2018) argue that without a strong institutional framework, even the most capable lecturers struggle to maximize the benefits of digital tools.

Lecturers who consistently use web-based research tools report increased academic productivity, wider access to global knowledge, and improved quality of research outputs. Digital platforms enable scholars to stay current with recent publications, participate in scholarly networks, and engage in professional development through webinars, MOOCs, and open-access publications (Adams, 2018). However, despite their advantages, usage remains uneven across institutions, primarily due to infrastructural and policy deficiencies. Creating an enabling environment is essential for bridging this gap and unlocking the full potential of web-based research tools in higher education (Hodges et al., 2020)

Methods

This study employed a descriptive survey research design to examine the use of web-based resources for improving research productivity among lecturers in the Faculty of Education at Taraba State University, Jalingo. The research sought to assess the awareness, frequency of use, perceived impact, challenges, and institutional support mechanisms related to web-based

research tools. A sample of 100 lecturers was selected using stratified random sampling, ensuring fair representation across various departments and academic ranks within the faculty. The data collection instrument was a structured questionnaire, which consisted of closed-ended and Likert-scale items to evaluate lecturers' awareness, usage patterns, challenges, and institutional support for using web-based resources. In addition, semi-structured interviews were conducted with 20 lecturers to gain qualitative insights into their experiences and perceptions regarding the role of web-based tools in enhancing research output. Quantitative data from the questionnaires were analyzed using descriptive statistics (frequencies and percentages) and correlation analysis to explore relationships between usage frequency and perceived research impact. The qualitative data from interviews were analyzed thematically to identify common patterns and perspectives on digital research practices. Ethical considerations were strictly observed: informed consent was obtained from all participants; anonymity and confidentiality were maintained; and respondents were informed of their right to withdraw at any stage of the study without consequence. Although the study provides valuable insights, its focus on a single faculty within the university limits the generalizability of its findings. Nevertheless, the combination of quantitative and qualitative approaches enhances the robustness and depth of the data, offering a comprehensive understanding of how web-based resources influence research productivity among lecturers at Taraba State University.

Results and Discussion

Research Question 1: To what extent are lecturers in the Faculty of Education at Taraba State University aware of available web-based resources and services for research purposes?

Table 1: Lecturers' Awareness of Web-Based Resources

Awareness Level	Frequency (n=100)	Percentage (%)
Highly Aware	40	40
Moderately Aware	35	35
Not Aware	25	25

The findings indicate a relatively high level of awareness among lecturers regarding the existence of web-based academic resources. This is a positive foundation for promoting digital research culture within the Faculty. However, the 25% who are unaware represent a significant portion of faculty members who may be excluded from valuable scholarly engagement. This gap suggests a need for awareness campaigns and structured orientation programs to ensure more inclusive access to digital research tool.

Research Question 2: What is the frequency of web-based resource utilization among lecturers in the Faculty of Education, and how does this influence their research activities?

Table 2: Frequency of Web-Based Resource Usage

Frequency of Use	Frequency (n=100)	Percentage (%)
Daily	20	20
Weekly	50	50
Occasionally	15	15
Never	15	15

Table 2 reveals that only 20% of lecturers use web-based resources daily, while the majority (50%) use them weekly. A notable 30% either use them occasionally or not at all. Although most lecturers use web-based resources at least weekly, daily engagement remains low. This infrequent usage may undermine their ability to stay updated with current literature and reduce their competitiveness in publishing. Encouraging more regular use through training and integrating digital research expectations into academic performance reviews could improve these trends.

Research Question 3: How do web-based resources and services impact the research productivity of lecturers in the Faculty of Education at Taraba State University?

Survey responses indicated that 70% of lecturers believe web-based resources significantly improved their capacity to conduct literature reviews, access current studies, and stay informed in their disciplines. Furthermore, 60% reported that these tools enhanced their ability to generate new research ideas and publish. The data clearly show that access to web-based resources positively correlates with increased research capability. Lecturers recognize these tools as essential in expanding their research scope and quality. This confirms findings by Mtega et al. (2020) that digital platforms support research engagement by making scholarly materials more accessible. However, without consistent usage (as seen in Research Question 2), the potential impact is not fully realized.

Research Question 4: What are the major challenges lecturers face in accessing and utilizing web-based resources to support their research work?

As detailed in Table 3, the most common barriers reported by lecturers include unreliable internet access (65%), insufficient digital literacy (50%), and lack of institutional support (45%).

Research Question 4: What are the major challenges lecturers face in accessing and utilizing web-based resources for improving their literacy skills?

Table 4: Challenges in Accessing and Using Web-Based Resources

Challenge	Frequency (n=100)	Percentage (%)
Unreliable Internet Access	65	65
Insufficient Digital Literacy	50	50
Lack of Institutional Support	45	45
Inadequate Digital Devices	30	30

These results highlight critical infrastructural and capacity-based limitations that restrict digital research efficiency. Internet instability, in particular, continues to impede consistent engagement with web platforms. Insufficient training in digital tools further widens the skills gap

among lecturers. These barriers mirror the findings of Ezeani et al. (2020), who emphasized the structural constraints facing Nigerian academics in adopting digital research resources.

Research Question 5: What institutional support mechanisms exist, or are lacking, that influence the effective use of web-based resources for research by lecturers in the Faculty of Education?

From the interviews, many lecturers reported a lack of formal institutional support, including absence of training workshops, limited access to subscription-based databases, and no clear policy promoting the use of digital research tools. Some participants noted that they personally subscribe to research platforms or rely on informal networks for access. This lack of structured support negatively affects lecturers' motivation and ability to consistently use web-based tools. As Tella et al. (2019) noted, institutions that invest in research-focused digital infrastructure and policies report higher engagement with academic databases. The situation at Taraba State University reveals a need for a strategic plan to institutionalize digital research support.

Research Question 6: How do lecturers perceive the potential of web-based resources in enhancing their research output and academic effectiveness?

Lecturers interviewed perceived web-based resources as powerful enablers of academic advancement. Many expressed that access to tools like Google Scholar and JSTOR had transformed their approach to research. However, they lamented the lack of institutional emphasis on digital research tools and poor internet facilities. This mixed perception reinforces the finding that while there is strong enthusiasm and acknowledgment of the benefits, systemic issues are hampering optimal use. Institutions must not only provide infrastructure but also align performance metrics with digital engagement to drive adoption.

Recommendations

1. Invest in Scalable Digital Infrastructure: Taraba State University should prioritize the expansion and stabilization of its internet connectivity across all faculties, particularly in

research-intensive units like the Faculty of Education. High-speed and reliable internet access is foundational for consistent use of web-based research tools. The university should also consider subscription partnerships with major academic databases and open-access repositories to reduce barriers to scholarly content.

2. **Establish Continuous Digital Research Training:** Regular, tailored training programs on digital research competencies should be institutionalized. These sessions should go beyond basic digital literacy to include advanced skills such as academic search techniques, use of citation/reference management tools (e.g., Zotero, Mendeley), digital publishing platforms, and collaborative research technologies. Trainings should be made part of ongoing professional development and staff appraisal systems.
3. **Develop Institutional Policies on Digital Research Integration:** The university should create and implement formal policies that encourage the systematic use of web-based research resources. These policies should outline expectations for digital engagement, integrate web-based tool usage into research performance evaluations, and provide incentives for lecturers who demonstrate effective digital scholarship practices.
4. **Create a Centralized Digital Research Hub:** A centralized digital portal should be developed to serve as a one-stop hub for accessing research resources, including open-access journals, licensed databases, institutional repositories, training materials, and technical support. This hub should be easy to navigate and regularly updated, serving both staff and postgraduate researchers.
5. **Strengthen Interdepartmental and Inter-Institutional Research Networks:** The university should promote digital collaboration among lecturers through virtual research clusters, online academic communities, and partnerships with other institutions. Facilitating cross-departmental and cross-institutional exchange can increase awareness of digital resources and foster joint research publications, workshops, and conferences.
6. **Embed Digital Research in Academic Culture:** University leadership should take deliberate steps to foster a culture of digital research. This includes recognizing and rewarding faculty who demonstrate strong digital scholarship, publishing in indexed journals, and participating in international digital research communities. Such cultural shifts will

position the university as a competitive academic institution on both national and global stages.

7. **Monitor and Evaluate Usage Trends Regularly:** A digital monitoring and evaluation (M&E) framework should be instituted to track lecturers' engagement with web-based resources. This will help identify usage gaps, inform policy updates, and ensure that investments in digital infrastructure and training are yielding measurable improvements in research output.

Conclusion

This study explored the use of Web-based Resources to Enhance Research Productivity among Lecturers in the Faculty of Education at Taraba State University, Jalingo. The findings revealed a high level of awareness of digital research tools such as Google Scholar, JSTOR, and ResearchGate. However, actual usage remains inconsistent, with a significant portion of lecturers engaging with these tools only occasionally or not at all. Despite this, the majority of respondents acknowledged the substantial role web-based resources play in facilitating efficient literature reviews, accessing current research, and improving academic output.

The study also identified persistent barriers to optimal usage, including unreliable internet connectivity, limited digital literacy, and a lack of institutional support. These challenges continue to undermine lecturers' ability to fully leverage digital platforms for research enhancement. Furthermore, qualitative insights revealed that while lecturers are motivated to engage with digital tools, the institutional environment is not sufficiently enabling to support widespread adoption.

To address these issues, the study recommends targeted investments in digital infrastructure, sustained training in digital research skills, and the development of clear institutional policies that embed digital scholarship into the academic workflow. Establishing centralized digital research hubs, fostering inter-institutional collaborations, and monitoring engagement patterns can further support the growth of a vibrant research culture.

While lecturers at Taraba State University show strong interest and awareness of web-based research tools, institutional commitment is critical for translating this awareness into meaningful, sustained academic productivity. Strengthening digital capacity will not only empower lecturers but also enhance the university's contribution to national and global scholarship.

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