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Assessment of Online Information Service Delivery among Postgraduate Students in Ahmadu Bello University, Zaria, Kaduna State, Nigeria

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Abstract

This study investigated the information needs of postgraduate students and challenges faced in using online databases at Ahmadu Bello University, Zaria. The study has two objectives which are; to identify the information need of postgraduate students in Ahmadu Bello University, Zaria, and to find out the challenges faced by postgraduate students in using online databases. Quantitative research methodology and survey research design were used for the study. The population of the study comprised of two faculties of Ahmadu Bello University Zaria which are Faculty of Education and Social Science, the Postgraduate students in the faculties were two thousand six hundred and seventy (2,670). The sample size of the study is 134 which is 5% of 2670 as opined by Yount (2006). Questionnaire was used as the instrument for data collection. The data collected was analyzed and interpreted using frequency tables and simple percentage. The study revealed that academic information (93.9%) represents significant secondary needs. The analysis identified skill-related challenges as the most significant barriers to effective database usage, with lack of skills (92.9%), and search confusion (91.8%), dominating the obstacles faced by students. The study concludes that postgraduate students require diverse information sources beyond academic materials, and their ability to utilize electronic resources is constrained by skill deficits rather than technological limitations. The research recommends implementing comprehensive information literacy programs and adopting diversified resource management strategies to bridge identified gaps and enhance research productivity among postgraduate students.

Keywords: Ahmadu Bello University, Database, Information Demands, Postgraduate, Obstacles, Usage

Introduction

The digital transformation of higher education has fundamentally altered how postgraduate students access, process, and utilize information resources in their academic endeavors. As universities increasingly adopt electronic databases and digital libraries as primary information sources, postgraduate students face unprecedented challenges in navigating these sophisticated information systems while simultaneously experiencing heightened information demands for their research activities (Majid & Eisenschitz, 2010). The complexity of postgraduate research requires students to access diverse, high-quality, and current information sources that can only be effectively obtained through comprehensive database systems and digital repositories. Ahmadu Bello University (ABU), Zaria, as one of Nigeria's premier institutions of higher learning, has invested substantially in electronic database subscriptions and digital information infrastructure to support advanced academic research. However, the mere availability of these resources does not guarantee effective utilization by postgraduate students, who often encounter multifaceted obstacles ranging from technical challenges to inadequate information literacy skills (Adeleke & Nwalo, 2017). The gap between information provision and effective utilization represents a critical challenge that can significantly impact the quality of postgraduate research outcomes and academic



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productivity. Understanding postgraduate information needs is crucial for developing targeted interventions that can bridge existing knowledge gaps and enhance research effectiveness. Information needs of postgraduate students are typically characterized by their complexity, specificity, and interdisciplinary nature, requiring sophisticated search strategies and access to multiple database platforms (Catalano, 2013). These needs evolve continuously throughout the research process, from initial literature exploration to detailed analysis and synthesis, demanding adaptive information-seeking behaviors and advanced database navigation skills. The significance of addressing database usage obstacles extends beyond individual student success to institutional research productivity and knowledge creation capacity. When postgraduate students cannot effectively access and utilize available information resources, the quality of their research suffers, potentially leading to inadequate literature reviews, methodological limitations, and reduced contribution to knowledge advancement (Bhatti, 2010). Furthermore, underutilization of expensive database subscriptions represents a significant waste of institutional resources and missed opportunities for research excellence.

Statement of the Problem

In an optimal academic environment, postgraduate students should possess comprehensive information literacy skills and have seamless access to relevant databases that fully support their research endeavors. Ideally, these students would demonstrate proficiency in identifying appropriate information sources, formulating effective search strategies, and efficiently navigating multiple database platforms to retrieve high-quality, current, and relevant information for their research projects (Association of College and Research Libraries, 2016). The ideal situation would feature well-trained students who can independently assess information quality, synthesize findings from diverse sources, and effectively manage their information resources throughout the research process. Additionally, institutions should provide robust technical infrastructure, comprehensive training programs, and ongoing support systems that enable students to maximize their utilization of available information resources (Ukachi, 2015). Despite significant investments in electronic database subscriptions and digital information infrastructure, there remains a substantial gap in understanding the specific information needs of postgraduate students at Ahmadu Bello University and the particular challenges they encounter when attempting to utilize available database resources. Existing literature on information needs and database usage has predominantly focused on undergraduate populations or has been conducted in different geographical and institutional contexts, limiting the applicability of findings to the specific circumstances of Nigerian postgraduate students. Furthermore, there is insufficient empirical evidence regarding the correlation between information needs identification and database usage challenges, particularly in the context of developing countries where technological infrastructure and information literacy levels may differ significantly from those in developed nations. Failure to address the information needs and database usage challenges of postgraduate students at Ahmadu Bello University will result in several detrimental consequences for both individual students and the institution as a whole. Students will continue to produce research of suboptimal quality due to inadequate access to relevant information sources, potentially leading to flawed literature reviews, inappropriate methodological choices, and limited contribution to knowledge advancement in their respective fields. The institution will experience reduced research productivity, decreased international visibility, and poor return on investment for expensive database subscriptions, ultimately compromising its reputation as a leading center for postgraduate education and research in Nigeria and beyond.

Objectives of the Study

The study focused on the following objectives

1. To identify the information need of postgraduate students in Ahmadu Bello University, Zaria.
2. To find out the challenges faced by postgraduate students in using online databases.

Literature Review

Information Needs of Postgraduate Students

The information needs of postgraduate students have been extensively studied across various academic disciplines and institutional contexts, revealing consistent patterns of complexity and specificity that distinguish them from undergraduate information requirements. Wilson's (2000) seminal work on information behavior established that postgraduate student exhibit sophisticated information needs characterized by their depth, interdisciplinary nature, and evolution throughout the research process. These students typically require access to current research findings, theoretical frameworks, methodological guidance, and empirical data that can support their original research contributions. The dynamic nature of



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postgraduate information needs reflects the iterative process of research development, where initial broad exploratory needs gradually narrow to highly specific requirements as research questions become more focused and methodologies are refined. Research conducted by Catalano (2013) demonstrated that postgraduate students' information needs are significantly influenced by their research methodology, disciplinary background, and stage of study. Students in the early stages of their programs tend to have broad, exploratory information needs focused on understanding their research domain and identifying potential research gaps. As they progress through their studies, their information needs become increasingly specific, requiring access to highly specialized resources, recent publications, and detailed methodological guidance. The study also revealed that postgraduate students require not only access to information but also guidance on information evaluation, synthesis, and integration into their research frameworks. The cultural and contextual factors influencing postgraduate information needs have been highlighted in studies conducted in developing countries. Onwuegbzie and Jiao (2004) found that postgraduate students in resource-constrained environments often develop adaptive information-seeking behaviors that compensate for limited access to comprehensive information resources. These students may rely more heavily on interpersonal sources, local publications, and alternative information channels when traditional academic databases are unavailable or difficult to access. However, this adaptation can potentially limit the scope and quality of their research if not properly supported by institutional interventions. Contemporary research has emphasized the increasing importance of digital literacy and technological competence in meeting postgraduate information needs. Madhusudhan (2010) argued that modern postgraduate students require not only traditional information literacy skills but also advanced digital competencies that enable them to navigate complex database interfaces, utilize sophisticated search features, and manage large volumes of electronic information effectively. The integration of emerging technologies such as artificial intelligence, machine learning, and automated research tools has further complicated the information landscape, requiring students to develop new skills and adapt their information-seeking strategies accordingly. The interdisciplinary nature of many postgraduate research projects has created additional complexity in information needs assessment and fulfillment. Students working on interdisciplinary topics often require access to information sources across multiple domains, necessitating familiarity with diverse database platforms, terminologies, and research methodologies (Zhang & Salaba, 2012). This complexity is particularly pronounced in emerging research areas where traditional disciplinary boundaries are blurred, requiring students to develop sophisticated information synthesis skills and access to comprehensive, multidisciplinary information resources.

Challenges in Online Database Usage

The challenges faced by postgraduate students in utilizing online databases represent a multifaceted problem that encompasses technical, cognitive, and institutional dimensions. Tenopir et al. (2009) identified several categories of database usage challenges, including interface complexity, search strategy formulation difficulties, information overload, and inadequate training support. Technical challenges often stem from poorly designed user interfaces that fail to accommodate diverse user needs and varying levels of technical expertise. Many database platforms prioritize comprehensive functionality over user-friendly design, resulting in complex navigation systems that can overwhelm users and impede efficient information retrieval. Cognitive challenges in database usage are particularly pronounced among postgraduate students who must develop sophisticated search strategies while simultaneously managing complex research projects. Research by Jiao and Onwuegbuzie (2001) revealed that many postgraduate students experience significant anxiety when confronting unfamiliar database interfaces, leading to suboptimal search behaviors and incomplete information retrieval. The cognitive load associated with learning multiple database systems, each with unique search syntaxes and organizational structures, can overwhelm students and result in superficial or ineffective use of available resources. Furthermore, the lack of immediate feedback and guidance within database systems can perpetuate ineffective search strategies and reinforce poor information-seeking habits.

Institutional challenges play a crucial role in determining the effectiveness of database usage among postgraduate students. Okello-Obura and Magara (2008) highlighted how inadequate training programs, limited technical support, and insufficient access to computing facilities can significantly impede database utilization. Many institutions provide minimal orientation to database resources, assuming that students will independently develop necessary skills through trial and error. This approach often results in persistent knowledge gaps and suboptimal utilization of expensive database subscriptions. Additionally, technical infrastructure limitations, including unreliable internet connectivity and outdated computer



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systems, can create significant barriers to effective database usage, particularly in developing country contexts. The specific challenges faced by postgraduate students in African universities have been documented in several studies that highlight unique contextual factors. Nhlapo (2015) found that students in South African universities frequently encountered challenges related to limited off-campus access to databases, inadequate training in advanced search techniques, and insufficient integration of database usage into curriculum design. Similar patterns have been observed in other African contexts, where postgraduate students often rely on basic search strategies and fail to utilize advanced database features that could significantly enhance their research efficiency and effectiveness. Recent studies have identified emerging challenges related to the proliferation of database platforms and the increasing complexity of academic information landscapes. Gul et al. (2019) argued that the multiplication of database options, while increasing access to information, has also created new challenges for students who must navigate multiple platforms with varying interfaces, search syntaxes, and organizational structures. The lack of standardization across database platforms means that students must invest significant time and effort in learning system-specific procedures, often without adequate institutional support or training resources. This complexity is compounded by the rapid evolution of database technologies, which requires continuous learning and adaptation by both students and support staff.

Methodology

Quantitative research methodology was adopted and survey research design was used for the study. The population of this study comprised of two (2) faculties of Ahmadu Bello University Zaria which include Faculty of Education and Social Science, and the PG students in the faculties were two thousand six hundred and seventy (2,670). These two faculties were selected because of the large population of the university as a whole and time will not permit. The total sample size for the two faculties is 134 which 5% of 2670 as opined by Yount (2006). Questionnaire was used as the instrument for data collection. The data collected was analyzed and interpreted using frequency tables and simple percentage.

Presentation of Result

Table 1: What are the Information Needs of Postgraduate Students in Ahmadu Bello University, Zaria?

S/N	Information Need	Frequency	Percentage (%)
1.	Academic Information	92	93.9
2.	Research material	72	73.5
3.	Information on Entertainment and Jokes	68	69.4
4.	Health Information	48	49.0
5.	Fashion Information	45	45.9
6.	Job related and Vacancy information	13	13.3
7.	Cultural Information	17	17.3
8.	Multi-Lingual Information resources	7	7.1
9.	Current News	62	63.3
10.	Useful Library instructions	23	23.5
11.	Political Information	51	52.0
12.	Financial Information	40	40.8
13.	Environmental Information	14	14.3

Source: *Field work (2024)*

The analysis of postgraduate information needs at Ahmadu Bello University reveals that academic information constitutes the most critical requirement among students, with 92 respondents (93.9%) identifying this as their primary information need. This was followed by research material with 72 respondents (73.5%), indicating the fundamental role of scholarly resources in postgraduate studies. Surprisingly, information on entertainment and jokes ranked third with 68 respondents (69.4%), suggesting that postgraduate students seek recreational content alongside academic resources. Current news followed with 62 respondents (63.3%), while political information was sought by 51 respondents (52.0%). Health information needs were identified by 48 respondents (49.0%), and fashion information by 45 respondents (45.9%). Financial information was required by 40 respondents (40.8%), while useful library instructions were needed by only 23 respondents (23.5%). Cultural information was sought by 17 respondents (17.3%), environmental information by 14 respondents (14.3%), job-related and vacancy information by 13 respondents (13.3%), and multi-lingual information resources by the least number of respondents at 7 (7.1%).



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The findings reveal that academic information and research materials dominate postgraduate information needs, which aligns with the primary purpose of postgraduate education. However, the high percentage of students seeking entertainment content suggests that postgraduate students require diverse information sources beyond academic materials for holistic development and stress relief. The relatively low demand for job-related information and multi-lingual resources may indicate that students are primarily focused on completing their studies rather than immediate career transitions, while the linguistic homogeneity of the student population reduces the need for multi-lingual resources. This finding has significant implications for library resource allocation and service planning, suggesting that while academic resources should remain the priority, libraries should also consider providing diverse information sources to meet the varied needs of postgraduate students.

Table 2: What are the Challenges being faced by Postgraduate Students in Using Online Databases in Ahmadu Bello University, Zaria.

S/N	Challenges	Frequency	Percentage (%)
1.	Lack of skills	91	92.9
2.	Limited space in the library	46	46.9
3.	Poor internet connection on campus	50	51.0
4.	Unreliable power supply when accessing these resources	45	45.9
5.	Lack of time among students	56	57.1
6.	Inadequate and irrelevant library materials	21	21.4
7.	Lack of awareness of existing resources in the library	87	88.8
8.	Confusion over how to begin the search for resources and how to locate materials	90	91.8
9.	Lack of indigenous Nigerian material available online	15	15.3
10.	Library Staff negative attitudes towards their patrons	84	85.7
11.	Lacking training in and knowledge of using e-resources	88	89.8
12.	Information is scattered in too many sources	20	20.4
13.	Library contains outdated information	26	26.5
14.	Unavailability of full-text articles	14	14.3
15.	Lack of full-text access to older journal articles	12	12.2
16.	Difficulties in accessing electronic information from home	23	23.5

Source: *Field work (2024)*

Table 2 presented the analysis of challenges faced by postgraduate students in using electronic information resources reveals that lack of skills represents the most significant barrier, with 91 respondents (92.9%) identifying this as a major challenge. This was closely followed by confusion over how to begin the search for resources and how to locate materials, affecting 90 respondents (91.8%). Lacking training in and knowledge of using e-resources was identified by 88 respondents (89.8%), while lack of awareness of existing resources in the library affected 87 respondents (88.8%). Library staff negative attitudes towards their patrons was reported by 84 respondents (85.7%). Lack of time among students was identified by 56 respondents (57.1%), while poor internet connection on campus affected 50 respondents (51.0%). Limited space in the library was a challenge for 46 respondents (46.9%), and unreliable power supply when accessing these resources affected 45 respondents (45.9%). Library contains outdated information was reported by 26 respondents (26.5%), while difficulties in accessing electronic information from home affected 23 respondents (23.5%). Information scattered in too many sources was identified by 20 respondents (20.4%), inadequate and irrelevant library materials by 21 respondents (21.4%), lack of indigenous Nigerian material available online by 15 respondents (15.3%), unavailability of full-text articles by 14 respondents (14.3%), and lack of full-text access to older journal articles by the least number at 12 respondents (12.2%). The findings indicate that skill-related challenges dominate the obstacles faced by postgraduate students, with lack of skills, search confusion, inadequate training, and lack of awareness representing the four most significant barriers. This pattern suggests that the primary challenge is not infrastructure or resource availability but rather human capacity and competency development. The high percentage of students experiencing these skill-related challenges indicates a systemic failure in information literacy education and user orientation programs. The relatively lower frequency of infrastructure-related



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challenges such as power supply and internet connectivity, while still significant, suggests that technological barriers, though present, are secondary to capacity-building needs. This finding has profound implications for institutional policy and resource allocation, emphasizing the need for comprehensive information literacy programs and user education initiatives rather than solely focusing on technological infrastructure improvements.

Summary of the Findings

The following are the findings of the study:

1. Academic information (93.9%) and research materials (73.5%) constitute the primary information needs of postgraduate students, confirming the scholarly focus of advanced academic programs.
2. The most significant obstacles to effective database usage are skill-related challenges, with lack of skills (92.9%) and search confusion (91.8%) representing the two most prevalent barriers.

Conclusion

The study reveals a complex information landscape at Ahmadu Bello University where postgraduate students exhibit diverse information needs dominated by academic and research requirements but extending to entertainment and current affairs. The research demonstrates that while students have access to electronic databases and information resources, their ability to effectively utilize these resources is severely constrained by skill deficits rather than technological limitations. The predominance of capacity-related challenges over infrastructure barriers suggests that the university's investment in electronic resources will only yield optimal returns when accompanied by comprehensive information literacy programs and sustained user education initiatives.

Recommendations

1. The university administration should establish a mandatory information literacy program coordinated by the library services department in collaboration with academic departments to address the identified skill deficits among postgraduate students, through hands-on training sessions on database navigation, advanced search techniques, and resource evaluation strategies, delivered through a combination of face-to-face workshops, online tutorials, and embedded course instruction throughout the academic year.
2. The library management should implement a balanced collection development policy that recognizes the diverse information needs of postgraduate students by allocating resources not only to academic databases but also to current news platforms, health information resources, and recreational content within appropriate limits. Through regular user needs assessment surveys, collaboration with student representatives in resource selection, and the development of subject-specific resource guides that highlight both academic and supplementary information sources relevant to different disciplines.

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