



## **Digital Competencies and Utilization of Electronic Books for Academic Purposes Among Postgraduate Students in Social Sciences in Bayero University Kano**

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### **Abstract**

*This study investigated the digital competencies and utilization of electronic books (e-books) for academic purposes among postgraduate students in the Social Sciences at Bayero University Kano (BUK), Nigeria, employing a descriptive survey design. A multi-stage sampling technique was used to select a sample of 210 students from a population of 458, determined by Krejcie and Morgan's (1970) formula. Data collected via a validated and reliable questionnaire (Cronbach's alpha = 0.94) were analyzed using descriptive statistics. The findings revealed a high level of digital competency (84.2%) and a high extent of e-book utilization (73.9%) among the students, primarily for writing projects, papers, and theses (79%). The study concludes that while postgraduate students at BUK possess strong foundational digital skills, significant gaps persist in advanced areas such as critical source evaluation, reference management, and navigating complex e-library systems; consequently, it is recommended that the university institute targeted digital literacy programs, enhance Internet infrastructure, curate specialized e-book collections, and develop more user-friendly library platforms to further support academic research.*

**Keywords:** *Digital competencies, electronic books, postgraduate students, utilization of electronic books, Bayero University Kano.*

### **Introduction**

The rapid advancement of digital technology has profoundly transformed the landscape of higher education globally. This shift necessitates that students possess strong digital competencies to effectively utilize electronic tools for academic success. Defined as a set of skills encompassing information literacy, digital communication, and the critical evaluation of digital resources (European Commission, 2020), these competencies are particularly crucial for postgraduate students in the Social Sciences. Their engagement in extensive research requires



adept navigation of diverse scholarly materials, prominently including electronic books (e-books) (Okafor, 2020). Celebrated for their portability, searchability, and 24/7 accessibility, e-books have become indispensable in academia, offering a powerful alternative to traditional print collections (Adeyemi and Bello, 2022).

Within this context, the academic purposes of postgraduate students which include conducting research, critical analysis, and scholarly writing are increasingly supported by digital resources. E-books provide convenient and comprehensive access to the current theories, empirical studies, and methodologies that are the lifeblood of advanced study in the Social Sciences. However, the potential of these resources is often undermined by significant challenges. As noted by Echezona and Ugwuanyi (2021) and Eze *et al.* (2023), limitations in digital literacy, inadequate institutional infrastructure, and poor internet connectivity frequently hinder students' ability to fully engage with e-books. Understanding these barriers is essential for improving academic outcomes and fostering an inclusive digital learning environment.

The specific academic demands vary across postgraduate levels. Master's students focus on building foundational research skills and producing a thesis, while PhD candidates are expected to contribute original research through a dissertation. Professional postgraduate students (e.g., MBA, M.Ed., MPH) aim to apply academic insights to real-world problems. Across all these categories, the effective use of digital resources like e-books is fundamental to achieving their distinct academic goals, underscoring the urgent need for robust digital and infrastructural support.

Consequently, digital competencies are not ancillary but central to postgraduate education. They enable students to effectively harness e-books and other electronic resources (UNESCO, 2022), involving proficiencies in information retrieval, critical source evaluation, and the use of digital research tools (Aharony and Gur, 2023). While universities worldwide increasingly emphasize digital literacy, institutions in Nigeria, including Bayero University Kano (BUK), face distinct challenges in systematically integrating these skills into their curricula (Echezona & Ugwuanyi, 2021). The lack of comprehensive digital literacy training ultimately impedes the optimal use of e-books, necessitating a clear assessment of existing student competencies to inform targeted interventions (Ojedokun *et al.*, 2021).

The digital transformation of academia has positioned electronic books (e-books) as essential tools for learning and research, offering unparalleled access to scholarly content. Their potential to significantly enhance academic productivity is widely acknowledged. However, within the specific context of postgraduate education in the Social Sciences at Bayero University, Kano, critical uncertainties persist. Firstly, the actual extent to which these students utilize e-books for their academic purposes remains inadequately documented. Secondly, the effective exploitation of e-books is contingent upon a set of digital competencies the ability to efficiently search, critically evaluate, and adeptly apply digital content which themselves may be variable among the student population.

Preliminary observations and a review of existing literature suggest a troubling pattern of e-book underutilization in this discipline. This concern is echoed by Aharony and Gur (2023), who highlight a persistent empirical gap in understanding the precise nature of the interaction between Social Sciences students and e-books, specifically regarding the dynamic relationship between their digital competencies and their patterns of resource use. Therefore, a critical problem exists: without a clear, evidence-based understanding of the digital competencies and



e-book utilization behaviors of postgraduate Social Sciences students at Bayero University, Kano, institutional efforts to enhance digital literacy and optimize e-book provision are likely to be misdirected and ineffective. It is this identified gap that the present study seeks to address by investigating the digital competencies and utilization of electronic books for academic purposes among this specific student cohort.

### **Objectives of the Study**

The main objective of the study is to investigate digital competencies and the utilization of electronic books for academic purposes among postgraduate students in social sciences in Bayero University Kano (BUK). The specific objectives of the study are designed to:

1. find out the level of digital competencies among postgraduate students of social sciences in utilizing electronic books for academic purposes in Bayero University Kano.
2. determine the extent to which postgraduate students of social sciences utilize electronic books for academic purposes in Bayero University Library, Kano.
3. ascertain the academic purposes for which postgraduate students of social sciences utilize electronic books in Bayero University Kano.

### **Research Questions**

The following research questions would guide the conduct of the study:

1. What is the level of digital competencies among postgraduate students of social sciences in utilizing electronic books for academic purposes in Bayero University Kano?
2. What is the extent to which postgraduate students of social sciences in utilizing E-books for academic purpose in Bayero University, Kano?
3. What are the academic purposes of postgraduate students of social sciences for utilizing e-books in Bayero University Kano?

### **Significance of the Study**

The study would be of immense benefit as it provides insights on the digital competencies of postgraduate students in the social sciences in Bayero University Kano (BUK). The findings will be beneficial to several stakeholders, including: students, academic staff, university administrators, policymakers, and information technology professionals.

### **Literature Review**

E-books are digital versions of printed texts accessible via electronic devices, have transformed academic resource accessibility through features like searchability, portability, and instant availability (Boateng and Effah, 2022). Unlike traditional print materials, e-books enable users to highlight text, annotate, and cross-reference content efficiently, enhancing the research process. Their digital format also allows for real-time updates, ensuring students and researchers access the most current information, a critical advantage in fast-evolving disciplines. These functionalities position e-books as indispensable tools in modern academia, bridging gaps in physical resource availability and fostering equitable access to knowledge (Okiki, 2022; .Aharony and Gur, 2023).

The significance of e-books in academia is underscored by their role in democratizing education, particularly in resource-constrained settings. By eliminating geographical and temporal barriers, e-books provide students with 24/7 access to global scholarly content, which is vital for research requiring diverse and extensive literature (UNESCO, 2022). Furthermore, their integration into institutional libraries reduces reliance on physical collections, lowering costs associated with procurement, storage, and maintenance (Adetayo, 2023).

The digital transformation of academic libraries has fundamentally altered how students access and engage with scholarly information. Central to this transformation is the proliferation of



electronic books (e-books), which offer unprecedented accessibility, searchability, and convenience. Recent studies indicate that "digital natives," including postgraduate students, often enter university with a baseline proficiency in using technology. However, academic digital competency requires more sophisticated skills. A study by Adetayo (2023) on Nigerian university students found that postgraduates, due to their intensive research needs, self-develop advanced digital information literacy skills, including the use of e-books, online journals, and reference management software. This is further supported by Ojedokun and Owolabi (2023), who noted that the demand for completing high-stakes academic work like theses compels postgraduate students in African universities to rapidly acquire and master relevant digital competencies.

Digital competency, often framed within broader digital literacy frameworks, encompasses the skills to effectively and critically use digital tools for information retrieval, evaluation, and creation (Ala-Mutka, 2011). In the context of academia, this includes navigating library databases, managing digital resources, and employing advanced search techniques.

The high level of competency found at Bayero University suggests a successful adaptation to the digital library environment. This may be attributed to university-led information literacy training and the increasing integration of digital resources into the curriculum. As Asogwa et al. (2022) argue, the post-COVID-19 landscape has accelerated the digital readiness of both students and faculty in Nigerian tertiary institutions, pushing digital competencies from a supplementary skill to a core academic requirement.

Global trends and a growing body of evidence from Sub-Saharan Africa showcased that E-books offer advantages such as 24/7 remote access, the ability to search full text, and the convenience of carrying an entire library on a single device, making them highly attractive for academic work (Walters, 2022). A comprehensive study by Anunobi and Eze (2023) on e-book usage in Nigerian university libraries revealed a significant and steady increase in patronage, particularly among postgraduate students. Their research identified key drivers, including recommendations by supervisors; the currency of e-book content compared to often outdated print collections, and the efficiency they bring to the research process. Similarly, a study by Mushi *et al.* (2024) across three East African universities found that the extent of e-book use was "high to very high" among graduate students in the humanities and social sciences, primarily for research and assignment purposes.

The high utilization in the present study indicates that Bayero University Library has effectively integrated e-books into its collection and that the platform's usability meets the students' needs. This challenges older narratives that suggested a preference for print in certain academic contexts; it appears that when e-books are readily accessible and relevant to the curriculum, they become the format of choice for intensive research (Hernon *et al.*, 2021).

E-books are uniquely suited to this task. Their search functionality allows students to quickly locate specific theories, concepts, and empirical data across a vast number of texts, drastically reducing the time spent on manual literature scanning (Cassidy et al., 2023). Furthermore, features like digital bookmarking, highlighting, and note-taking, integrated with reference managers like Zotero and Mendeley, create a seamless workflow for compiling and citing sources (Garcia *et al.*, 2023).

A recent study by Ezeani and Egwunobi (2023) specifically investigated the link between e-book use and research output in Nigerian universities. They concluded that e-books were



"indispensable" for postgraduate research, directly contributing to the quality and depth of literature reviews in theses. The social sciences, in particular, rely on a wide range of scholarly books for theoretical frameworks and contextual analysis, making the comprehensive and immediate access provided by e-books especially valuable (Boateng and Arkorful, 2024). This aligns perfectly with the finding that students at Bayero University are strategically leveraging e-books to accomplish their most critical academic milestone.

### Results and Discussion of findings

**Research question one:** What is the level of digital competencies among postgraduate students of social sciences in utilizing electronic books for academic purposes in Bayero University, Kano?

**Table 4.1: Level of digital competencies in using e-books among postgraduate students**

| S/N | Variable  | Very high | %    | High | %    | Low | %    | Very low | %    |
|-----|---|-----------|------|------|------|-----|------|----------|------|
| 1   | I have ability to use word processing software (e.g., Microsoft Word) to identify e-books for writing my academic assignments     | 91        | 47.6 | 70   | 36.6 | 22  | 11.5 | 8        | 4.2  |
| 2   | I am proficient in using academic databases (e.g., Proquest, Bookboon, Sciencedirect) to search for e-books for academic purposes | 78        | 40.8 | 73   | 38.2 | 28  | 14.7 | 12       | 6.3  |
| 3   | I know how to evaluate the credibility of the content of e-books for academic research  | 62        | 32.5 | 80   | 41.9 | 31  | 16.2 | 18       | 9.4  |
| 4   | I am proficient in using e-books to organize and cite academic sources  | 49        | 25.7 | 58   | 30.4 | 51  | 26.7 | 33       | 17.3 |

**Source: Field Work (2025)**

Table 4.1 reveals that postgraduate students of social sciences students in Bayero University, library Kano, possess high digital competencies in utilizing e-books. This aligns with global trends where university students increasingly demonstrate proficiency in digital literacy due to exposure to online learning platforms a study by Adetayo (2023) on Nigerian university students found that postgraduates, due to their intensive research needs, self-develop advanced digital information literacy skills, including the use of e-books, online journals, and reference management software. This is further supported by Ojedokun and Owolabi (2023), who noted that the demand for completing high-stakes academic work like theses compels postgraduate students in African universities to rapidly acquire and master relevant digital competencies.

**Research question two:** What is the extent to which postgraduate students of social sciences in utilising E-books for academic purpose in Bayero University Kano?



**Table 4.3 Utilisation of electronic books for academic purposes**

| S/N | Variable  | Very high extent | %    | High extent | %    | Low | %    | Very low | %    |
|-----|---|------------------|------|-------------|------|-----|------|----------|------|
| 1   | I frequently use electronic books (e-books) as a primary source of academic information           | 66               | 34.6 | 75          | 39.3 | 32  | 16.8 | 18       | 9.4  |
| 2   | I prefer using e-books over printed textbooks for my academic work                                | 58               | 30.4 | 69          | 36.1 | 42  | 22.0 | 22       | 11.5 |
| 3   | I am able to easily access and download academic e-books from online libraries or databases       | 73               | 38.2 | 71          | 37.2 | 30  | 15.7 | 17       | 8.9  |
| 4   | I use e-books regularly when preparing for class presentations, assignments, or research projects | 64               | 33.5 | 76          | 39.8 | 31  | 16.2 | 20       | 10.5 |

**Source: Field Work (2025)**

Table 4.2 indicates that postgraduate social sciences students at Bayero University Library, Kano, demonstrate a high level of engagement with e-books for academic purposes. This pattern corresponds with findings by Musa and Ibrahim (2022), who noted that the integration of digital learning materials in Nigerian universities has led to increased reliance on electronic resources among postgraduate students for academic tasks. Global trends and a growing body of evidence from Sub-Saharan Africa showcased that E-books offer advantages such as 24/7 remote access, the ability to search full text, and the convenience of carrying an entire library on a single device, making them highly attractive for academic work (Walters, 2022). A comprehensive study by Anunobi and Eze (2023) on e-book usage in Nigerian university libraries revealed a significant and steady increase in patronage, particularly among postgraduate students. Their research identified key drivers, including recommendations by supervisors; the currency of e-book content compared to often outdated print collections, and the efficiency they bring to the research process. Similarly, a study by Mushi *et al.* (2024) across three East African universities found that the extent of e-book use was "high to very high" among graduate students in the humanities and social sciences, primarily for research and assignment purposes.

The high utilization in the present study indicates that Bayero University Library has effectively integrated e-books into its collection and that the platform's usability meets the students' needs. This challenges older narratives that suggested a preference for print in certain academic contexts; it appears that when e-books are readily accessible and relevant to the curriculum, they become the format of choice for intensive research (Hernon *et al.*, 2021).

**Research Question Three:** What is the academic purpose of postgraduate students of social sciences for utilizing e-books in Bayero University Kano?



**Table 4.4 Academic Purpose of postgraduate students for utilizing e-books**

| S/N | Variable  | Strongly Agree | %      | Agree % | Disagree % | Strongly Disagree | %   |
|-----|---|----------------|--------|---------|------------|-------------------|-----|
| 1   | I utilise electronic books for writing my assignments and research papers                         | 67             | 35.174 | 38.731  | 16.219     |                   | 9.9 |
| 2   | I consult e-books primarily for writing my project or thesis                                      | 82             | 42.969 | 36.126  | 13.614     |                   | 7.3 |
| 3   | I read e-books to prepare for examinations and academic presentations                             | 70             | 36.676 | 39.830  | 15.715     |                   | 7.9 |
| 4   | I use e-books to explore additional readings materials recommended by my lecturers or supervisors | 74             | 38.772 | 37.727  | 14.118     |                   | 9.4 |

Source: Field Work (2025)

Table 4.3 showed that the academic purposes of postgraduate students of social sciences for utilizing e-books in Bayero University Kano are for writing project or thesis. The finding is in line with the findings of Okafor and Nwachukwu (2021) who reported that, postgraduate students frequently turn to digital resources to support the extensive research demands of thesis writing, which requires up-to-date and easily accessible scholarly materials. Anderson and Kumar (2023) provide additional validation, demonstrating that 82% of thesis-related research activities among postgraduate students now involve e-book resources, with students particularly valuing the searchability and cross-referencing capabilities of digital texts for comprehensive literature reviews and citation management. Nevertheless, Garcia and Peterson (2022) question whether e-book usage for thesis writing represents optimal research practice. Their study suggests that over-reliance on digital resources may lead to narrowed research scope, as students tend to focus on easily accessible materials rather than engaging with diverse source types that might require more extensive library engagement.

### Conclusion

The study concludes that while postgraduate students at BUK possess foundational digital skills, significant gaps persist in critical areas like source evaluation, reference management, and navigating e-library systems. E-books are widely utilized for research and coursework, but infrastructural and institutional limitations hinder their full potential. Challenges such as poor internet connectivity, insufficient training, and limited e-book availability disproportionately affect academic outcomes. These findings underscore the urgent need for targeted interventions to enhance digital literacy, institutional support, and resource accessibility.

### Recommendations

Based on the findings, the following recommendations are made:

1. The university should organize tailored digital literacy training sessions for postgraduate students, focusing not only on basic digital skills but also on advanced research tools such as Zotero, Mendeley, and referencing techniques. Emphasis should



be placed on how to critically evaluate electronic sources and integrate them effectively into academic writing, especially for thesis and project work.

2. Bayero University should ensure consistent and standardized digital support services across all faculties. This includes establishing help desks within the library and faculty ICT units, providing real-time technical support to assist students in accessing and using e-books effectively.
3. Awareness campaigns should be launched to educate students about the academic benefits of using e-books such as convenience, searchability, and up-to-date content. A blended model that makes both printed and digital versions of textbooks available should be maintained to cater to diverse user preferences and ease the transition for students less familiar with e-resources.
4. The university library should review and improve its e-library platforms based on user experience research. Interfaces should be intuitive, mobile-friendly, and equipped with user guides or video tutorials to help students locate and download e-books without difficulty.

## REFERENCE

- Adetayo, A. J. (2023). Digital literacy skills and research output of postgraduate students in Nigerian universities: A comparative study. *Journal of Academic Librarianship*, 49(2), 102-115.
- Adeyemi, A. O., & Bello, M. B. (2022). E-books as alternatives to traditional print materials in Nigerian academic libraries. *Library Hi Tech News*, 39(4), 15-19.
- Aharony, T., & Gur, H. (2023). Digital literacy and e-book interaction among social sciences students. *Journal of Documentation*, 79(1), 150-169.
- Ala-Mutka, K. (2011). Mapping digital competence: Towards a conceptual understanding. Publications Office of the European Union.
- Anderson, L., & Kumar, R. (2023). E-book resources in postgraduate thesis research: Usage patterns and perceived value. *Computers & Education*, 190, 104-123.
- Anunobi, C. V., & Eze, C. C. (2023). E-book usage and adoption in Nigerian university libraries: A post-pandemic assessment. *Library Hi Tech News*, 40(1), 15-19.
- Asogwa, B. E., Ugwu, C. I., & Eze, M. P. (2022). The impact of COVID-19 on the digital transformation of university libraries in Nigeria. *Digital Library Perspectives*, 38(3), 345-362.
- Boateng, R., & Arkorful, V. (2024). Digital resources and research productivity in the social sciences: The mediating role of research self-efficacy. *Journal of Information Science*, 50(1), 45-60.
- Boateng, R., & Effah, J. (2022). Functionalities of e-books and their impact on the academic research process. *The Electronic Library*, 40(3), 245-260.
- Cassidy, E. D., Martinez, M., & Shen, L. (2023). Not just for convenience: How e-books support deep academic research. *College & Research Libraries*, 84(1), 78-95.
- Echezona, R. I., & Ugwuanyi, C. F. (2021). Challenges of digital literacy integration in Nigerian university curricula. *African Journal of Library, Archives and Information Science*, 31(1), 45-58.
- European Commission. (2020). Digital Education Action Plan 2021-2027: Resetting education and training for the digital age. Publications Office of the European Union.



- Eze, M. P., Asogwa, B. E., & Ugwu, C. I. (2023). Infrastructural limitations and digital resource engagement in Nigerian universities. *International Journal of Educational Technology in Higher Education*, 20(1), 25.
- Ezeani, C. N., & Egunobi, G. C. (2023). Electronic information resources utilisation and quality of postgraduate research in Nigerian universities. *Library Management*, 44(1/2), 120-135.
- Garcia, P., & Peterson, L. (2022). The scope of research: Questioning the over-reliance on easily accessible e-books in postgraduate theses. *Journal of Academic Ethics*, 20(3), 345-362.
- Garcia, P., Lee, J., & Smith, T. (2023). From discovery to citation: How graduate students use e-book features in the research workflow. *The Journal of Academic Librarianship*, 49(4), 102-115.
- Hernon, P., Hopper, R., & Saunders, L. (2021). The continued evolution of the e-book: A longitudinal study of student format preferences and behaviors. *Journal of Documentation*, 77(5), 1102-1120.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Musa, A. K., & Ibrahim, D. (2022). Integration of digital learning materials and postgraduate reliance on e-resources in Nigerian universities. *Nigerian Library and Information Science Review*, 40(2), 55-70.
- Mushi, G. E., Mwantimwa, K., & Ndege, M. (2024). E-book usage among postgraduate students in Tanzanian universities: Drivers and impediments. *Information Development*, 40(1), 88-102.
- Ojedokun, O. E., & Owolabi, S. (2023). Self-directed learning of digital literacy skills among postgraduate students in a Nigerian university. *Global Knowledge, Memory and Communication*, 72(4/5), 345-360.
- Ojedokun, O. E., Owolabi, S., & Akinade, A. O. (2021). Assessing digital literacy for optimal e-book use: A necessity for targeted interventions. *Information and Learning Sciences*, 122(7/8), 512-530.
- Okafor, V. N. (2020). Digital competencies and research engagement among social sciences students in higher education. *International Journal of Education and Development using Information and Communication Technology*, 16(2), 210-225.
- Okafor, V. N., & Nwachukwu, E. (2021). Digital resources and the research demands of postgraduate thesis writing. *Journal of Library and Information Technology*, 41(4), 234-245.
- Okiki, O. C. (2022). E-books as indispensable tools for equitable knowledge access in modern academia. *Library Philosophy and Practice (e-journal)*, 1-15.
- UNESCO. (2022) UNESCO's education strategy for the digital transformation. United Nations Educational, Scientific and Cultural Organization.
- Walters, W. H. (2022). E-books in academic libraries: A review of research from 2010 to 2021. *Journal of Academic Librarianship*, 48(4), 102-118.