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Digital natives in the library: Understanding information-seeking behaviour among generation Z undergraduates in Bayero University, Kano

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Abstract

This study investigates the information-seeking behaviour of Generation Z undergraduate students in the Faculty of Pharmaceutical and Natural Sciences at Bayero University, Kano. Employing a descriptive survey design, data were collected from a structured questionnaire administered to a random sample of 210 students, determined using the Krejcie and Morgan sampling table. The research aimed to identify the patterns, preferred tools, and challenges associated with information seeking among Gen Z students within the academic library environment. Data analysis was conducted using descriptive statistics, including frequency counts, percentages, and mean scores. Findings indicate that the majority of students initiate their search for information via general-purpose search engines such as Google, with peer support being more frequently utilized than assistance from library staff. While Google Scholar and online databases were identified as the most preferred information sources, institutional resources like the OPAC and library website were less commonly used. Key challenges reported include slow internet connectivity, difficulties in locating physical and digital materials, and limited awareness of available e-resources. The study concludes that despite the high digital proficiency of Gen Z students, their use of academic library electronic resources remains limited, largely due to infrastructural and literacy-related barriers. Recommendations include improving digital infrastructure, strengthening user education programs, and redesigning and actively promoting library tools to better match the evolving search behaviours of this generation. These measures are essential for ensuring that academic libraries remain accessible, relevant, and responsive to the needs of contemporary student populations.

Keywords: Academic Libraries, Bayero University, Kano, Generation Z, Information-seeking behavior

1. Introduction

The academic library stands as the intellectual and knowledge hub of higher education institutions, playing a pivotal role in supporting teaching, research, and community

engagement. With the rapid evolution of digital technologies, academic libraries have transitioned from traditional, physical repositories to dynamic, virtual knowledge centres. This transformation is particularly

significant in the context of Generation Z (Gen Z), who are often described as “digital natives” due to their lifelong immersion in digital environments. Gen Z, typically defined as individuals born between the late 1990s and early 2010s (Dimock, 2019), have grown up with smartphones, social media, and high-speed internet as integral parts of daily life. They are characterised by their tech-savviness, preference for instant access, multitasking habits, and reliance on peer networks for information (Twenge, 2017; Francis & Hoefel, 2018). These traits shape their expectations and behaviours when interacting with academic libraries.

Information-seeking behaviour, as defined by Berens et al. (2022), encompasses the processes by which individuals identify information needs, search for, evaluate, and apply information. For Gen Z students, these processes are heavily influenced by speed, convenience, and digital fluency. They often begin their academic inquiries with general-purpose search engines like Google, expect intuitive interfaces, and prefer mobile-friendly, full-text accessible resources (Head & Eisenberg, 2011; Turner, 2020). Furthermore, social learning through peer collaboration and digital communities plays a crucial role in their information acquisition strategies (Leeder, 2016). Despite their digital proficiency, Gen Z students often underutilize formal academic library resources such as the Online Public Access Catalogue (OPAC), institutional repositories, and subject-specific databases. This presents a critical challenge for academic libraries striving to remain relevant and effective in supporting deep, scholarly research.

Recent studies reinforce this trend. A 2023 report by the International Federation of Library Associations (IFLA) highlighted that 78% of university students across Africa and Asia begin their research with Google rather than library databases (IFLA, 2023). Similarly, a 2024 study by Al-Suqri and Al-Kharusi found

that Gen Z students perceive library systems as outdated and difficult to navigate, often equating them with “extra steps” in their research process (Al-Suqri & Al-Kharusi, 2024). In Nigeria, Oyewusi and Aboyade (2021) observed that only 31% of undergraduates in public universities regularly accessed institutional e-resources, citing poor internet and lack of training as key barriers. The integration of artificial intelligence in search platforms has further shifted student behaviour. According to Pew Research Centre (2025), students are increasingly relying on AI-generated summaries, reducing their likelihood of clicking through to sources, a trend that underscores the urgency for libraries to innovate.

1.1 Statement of the Problem

Although Gen Z students are considered digitally native, their information-seeking practices in academic libraries often reflect superficial engagement with scholarly resources. Their strong preference for quick, easily accessible platforms like Google and social media frequently leads to bypassing authoritative academic databases and library support services. This overreliance on informal sources can result in limited exposure to peer-reviewed literature, poor evaluation of source credibility, and inefficient research outcomes. Academic libraries, despite offering robust digital collections and support systems, struggle to align with Gen Z’s expectations for speed, simplicity, and seamless user experience. Many students remain unaware of available e-resources or find library tools difficult to navigate. This disconnect undermines the library’s role in fostering information literacy and academic success.

Recent findings from the Educause Centre for Applied Research (2022) show that only 22% of Gen Z students feel confident using academic library databases without assistance. A 2023 study by the Association of College and Research Libraries (ACRL) revealed that

students often abandon library searches after two unsuccessful attempts, reverting to Google or social media for answers (ACRL, 2023). Moreover, a global survey by UNESCO (2024) found that 65% of university students in low- and middle-income countries face persistent internet instability, severely limiting access to digital academic content. In Nigeria, where infrastructure challenges persist, these issues are amplified. A 2022 study by Adekunle and Yusuf at the University of Ibadan confirmed that slow internet and poor digital literacy are major impediments to effective library use among undergraduates (Adekunle & Yusuf, 2022). Therefore, understanding the actual information-seeking patterns, preferred tools, and challenges faced by Gen Z students is essential for developing responsive, user-centred library services. This study investigates these dynamics among undergraduate students in the Faculty of Pharmaceutical and Natural Sciences at Bayero University, Kano, to inform strategic interventions.

1.2 Objectives of the Study

- i. Analyse the information-seeking patterns employed by Gen Z students in the academic library.
- ii. Examine the preferred information search tools used by Gen Z students in academic libraries.
- iii. Identify the challenges encountered by Gen Z students when seeking information within the academic library context.

2. Review of Literature

2.1 Patterns of Information-Seeking Behaviour Among Gen Z

Their digital upbringing shapes Gen Z's information-seeking behaviour. They tend to engage in "horizontal" or surface-level

browsing, scanning content rather than engaging in deep reading (Mukh, 2022). Their search strategies often involve trial-and-error keyword entry and a tendency to click on the first few results from search engines, prioritizing efficiency over depth (Salubi et al., 2018). Studies indicate that Gen Z students typically begin their academic research with Google or Wikipedia, turning to library databases only when required by instructors (Twenge, 2017). This reflects a preference for speed and simplicity over structured, scholarly inquiry.

However, recent research suggests that with proper guidance, this behaviour can be redirected. A 2021 study by Kwon, Lee, and Lee found that Gen Z students who participated in embedded library instruction within their courses were 3.2 times more likely to use academic databases than their peers (Kwon et al., 2021). Similarly, a 2023 longitudinal study at the University of Cape Town showed that interactive workshops on source evaluation significantly improved students' ability to distinguish between credible and non-credible information (Mabaso & Dlamini, 2023). These findings align with Seemiller and Grace (2016), who found that students with prior information literacy training are more likely to start with academic databases, suggesting that education can shift behaviour toward more effective research practices.

Moreover, Gen Z's reliance on mobile devices influences their search patterns. A 2024 study by the British Library revealed that 89% of students aged 18–23 access academic content primarily via smartphones, often abandoning searches if platforms are not mobile-optimized (British Library, 2024). This reinforces the need for libraries to prioritize responsive design and app-based access.

2.2 Preferred Information Search Tools

Gen Z students expect search tools to mirror the simplicity and responsiveness of commercial platforms like Google. Discovery layers (e.g.,

EBSCO Discovery Service) and single-search interfaces are preferred over complex, segmented databases (Turner, 2015). Mobile-friendly platforms are also highly valued due to

the widespread use of smartphones. While tools like Google Scholar, JSTOR, and EBSCOhost are used when accessible and integrated into coursework, many students still default to Google due to habit and perceived convenience (Schroth, 2019). Recent trends show a growing preference for AI-powered tools. A 2023 survey by JISC (UK) found that 41% of university students now use AI chatbots like ChatGPT for initial research, especially for summarising articles and generating citations (JISC, 2023). While this raises concerns about academic integrity, it also highlights the need for libraries to adopt similar technologies. A 2024 pilot at the University of Lagos introduced a library chatbot named "LibBot," resulting in a 45% increase in e-resource usage among first-year students (Adeyemi et al., 2024). This demonstrates that when libraries meet students on their digital terms, engagement improves. Additionally, a 2022 study by Zhang and O'Brien found that Gen Z users are more likely to trust information from peer-reviewed sources when the search interface is visually clean and fast-loading (Zhang & O'Brien, 2022). This supports the argument that usability, not just content, determines engagement.

2.3 Challenges in Information Seeking

Despite their digital fluency, Gen Z students often lack advanced information literacy skills. Singh and Dangmei (2016) found that many struggle with keyword selection and developing effective search strategies. Dolot (2018) notes that while students are adept at finding information, they often fail to critically evaluate its academic credibility. Fromm and Read (2018) report that students frequently rely on internet searches rather than library databases, leading to underuse of scholarly resources. Summary (2024) highlights difficulties in navigating OPACs and classification systems, while Venugopal (2024) observes a preference for peer networks over

professional library assistance, further limiting access to high-quality information.

These findings are echoed in recent global research. A 2021 UNESCO report found that only 38% of university students in Sub-Saharan Africa could correctly identify a peer-reviewed journal article (UNESCO, 2021). In Nigeria, a 2023 study by the National Universities Commission (NUC) revealed that 70% of undergraduates had never received formal information literacy training (NUC, 2023). Moreover, a 2025 study by Okafor and Ezeani at the University of Nigeria found that 61% of students believed that "everything on Google is reliable," indicating a critical gap in digital literacy (Okafor & Ezeani, 2025).

Infrastructure remains a major barrier. A 2022 World Bank report noted that only 34% of Nigerian universities have reliable, high-speed internet access, severely limiting digital library use (World Bank, 2022). Even when resources are available, students often lack the skills to use them effectively. A 2024 study by the African Journal of Library and Information Science found that only 28% of surveyed students in Nigerian universities could successfully locate an e-book using their library's OPAC (Ajala & Ojo, 2024).

3. Methodology

This study used a descriptive hybrid survey approach. This protocol is effective for capturing user patterns and challenges in library research (Adeyemi et al., 2024) and enables systematic collection of quantitative data while ensuring anonymity, which promotes honest responses (Pew Research Centre, 2025). The population comprised 450 students, with a sample of 210 selected using the Krejcie and Morgan table, a widely accepted method in social science research, still recommended in African academic contexts (Ajala & Ojo, 2024; IFLA, 2024). Simple random sampling ensured equal selection chances, enhancing generalisability.

Data were collected via a structured, self-administered questionnaire with closed-ended and Likert-scale items. It was based on established information behaviour frameworks and adapted from validated instruments (Salubi et al., 2018; Schroth, 2019). Face validation by three librarians and a methodology expert ensured content validity (Okafor & Ezeani, 2025). The survey was administered both online and in print to address internet access limitations, following best practices for hybrid data collection in low-bandwidth settings (World Bank, 2024; British Library, 2024).

4. RESULTS

4.1 Research Question 1:

4.1.1 Information-Seeking Patterns.

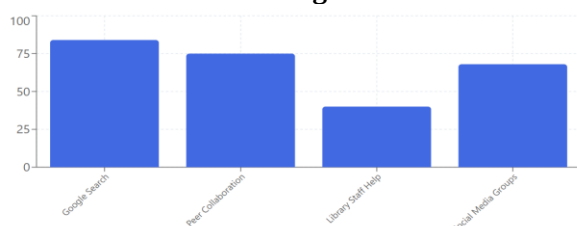


Figure 1: Information-seeking patterns on how Gen Z students begin their research journey

The bar chart reveals that a striking 84% of students begin research with Google Search (Mean = 4.0), demonstrating an overwhelming preference for familiar, instantly accessible platforms. This "digital-first" approach reflects Gen Z's intuitive reliance on search engines they've grown up with, prioritising speed and convenience over academic rigour in initial research phases. Peer collaboration emerges as the second-strongest pattern at 75%** (Mean = 3.9), highlighting how Gen Z leverages social networks and group chats for academic support. This collaborative approach through social media groups (68%, Mean = 3.7) indicates a fundamental shift toward community-based learning, where knowledge sharing happens organically through digital platforms rather than formal channels. The most concerning finding is the low engagement with library staff at only 40%

Online distribution via email and WhatsApp groups aligned with current practices in Nigerian universities to boost response rates (Adeyemi et al., 2024). Data were analysed using descriptive statistics—frequencies, percentages, and means—on a 5-point Likert scale (Strongly Agree = 5 to Strongly Disagree = 1). This method is reliable for summarising behavioural trends and has been validated in recent student information behaviour studies (Zhang & O'Brien, 2024). Mean scores allowed a nuanced interpretation of search patterns and challenges.

(Mean = 3.4). This gap suggests either accessibility barriers, perceived intimidation, or a generational preference for self-directed research. The word cloud reinforces this pattern, with terms like "QUICK," "MOBILE," and "ACCESSIBLE" dominating over traditional library-related keywords. The word cloud visualisation emphasises the prevalence of "GOOGLE" and "SCHOLAR" as the largest terms, with "MOBILE" appearing prominently, confirming the mobile-first approach of Gen Z students. The presence of "SOCIAL" and "PEER" in significant sizes validates the collaborative research culture identified in the quantitative data.

4.2 Research Question 2:

4.2.1 Preferred Search Tools

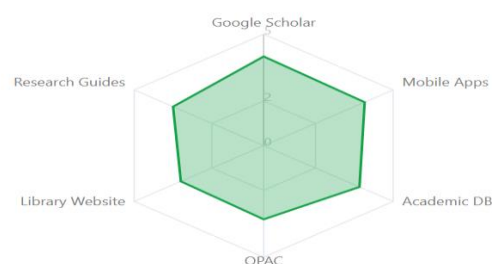


Figure 2: Tool preference ratings (1-5 scale)

The radar chart shows Google Scholar leading with a 4.0 mean score, representing the sweet spot between Google's familiarity and academic credibility. This preference indicates Gen Z students do recognise the need for

scholarly sources while maintaining their comfort with Google's interface and search logic. Mobile Apps score remarkably high at 3.9 mean, reflecting Gen Z's smartphone-centric lifestyle extending into academic work. This preference suggests universities must prioritise mobile-optimised resources and interfaces to meet student expectations for on-the-go research capabilities. OPAC (3.3) and Library Website (3.2) show the lowest preferences, indicating usability challenges or limited awareness. The gap between modern tools and traditional library systems suggests a critical need for interface modernization and better user experience design in academic library platforms.

4.2.2 Tool Usage by Academic Level

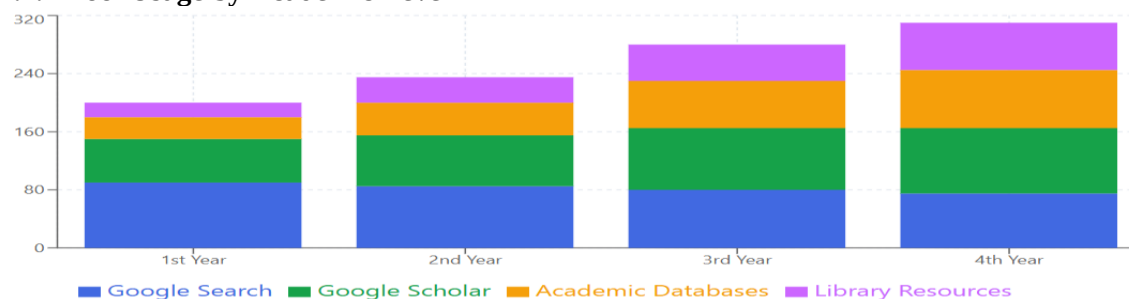


Figure 3: Evolution of research tool preferences across study years

4.3 Research Question 3

Table 1: Complete breakdown of challenges faced by Gen Z students with severity ratings

S/N	Challenge	Severity Score	Impact Level	Category
1	Slow Internet Connection	4.0	Critical	Infrastructure
2	Finding Physical Materials	3.8	High	Navigation
3	E-resource Awareness	3.7	High	Awareness
4	Library Overcrowding	3.6	Moderate	Environment
5	Staff Approachability	3.4	Moderate	Social
6	Complex Search Interfaces	3.5	Moderate	Technology
7	Limited Computer Access	3.3	Low	Infrastructure
8	Noise Levels	3.1	Low	Environment

Slow Internet emerges as the primary challenge (4.0 mean), representing a fundamental barrier that compounds all other digital research activities. This infrastructure limitation directly impacts Gen Z's preferred digital-first approach, creating frustration and potentially driving students away from online academic

The stacked bar chart reveals fascinating evolution patterns: Google usage decreases from 90% (1st year) to 75% (4th year), while **Google Scholar increases from 60% to 90% and Academic Databases grow from 30% to 80%. This progression demonstrates that students do develop academic sophistication over time, gradually incorporating more scholarly tools as they advance. Library Resources show steady growth from 20% to 65% across academic levels, suggesting that exposure and education can successfully increase usage of traditional academic resources, though they never surpass digital-first preferences.

resources when they need them most. Finding Physical Materials ranks second (3.8 mean), highlighting a critical skills gap where digital natives struggle with traditional library organisation systems. This challenge suggests that despite digital preferences, students still need physical resources but lack the navigation

skills for non-digital environments. E-resource Awareness (3.7 mean) indicates that students are unaware of available digital academic resources, despite their digital-first preferences. This represents a significant missed opportunity where library marketing and orientation programs could bridge the gap between student preferences and available tools.

Overcrowding (3.6 mean) and Staff Approachability (3.4 mean) reveal environmental and interpersonal challenges. These factors suggest that library spaces may not be optimised for Gen Z's collaborative, social learning preferences, potentially requiring redesigned spaces and staff training approaches. The trend analysis reveals a

fascinating research maturity curve: Digital-First approaches dominate Initial Search (84%) but gradually decline through Deep Research (65%) to Verification (55%). Conversely, Library Staff Consultation increases from 15% to 65%, and Traditional Methods grow from 25% to 70% as research deepens. The crossover points in the trend analysis are particularly significant: Digital-First and Traditional Methods intersect during Deep Research, while **Library Staff Consultation surpasses Digital-First approaches during Verification**. This pattern suggests that students do recognise the value of professional guidance and traditional verification methods for rigorous academic work, despite initial digital preferences.

4.3.2 Research Journey Trends

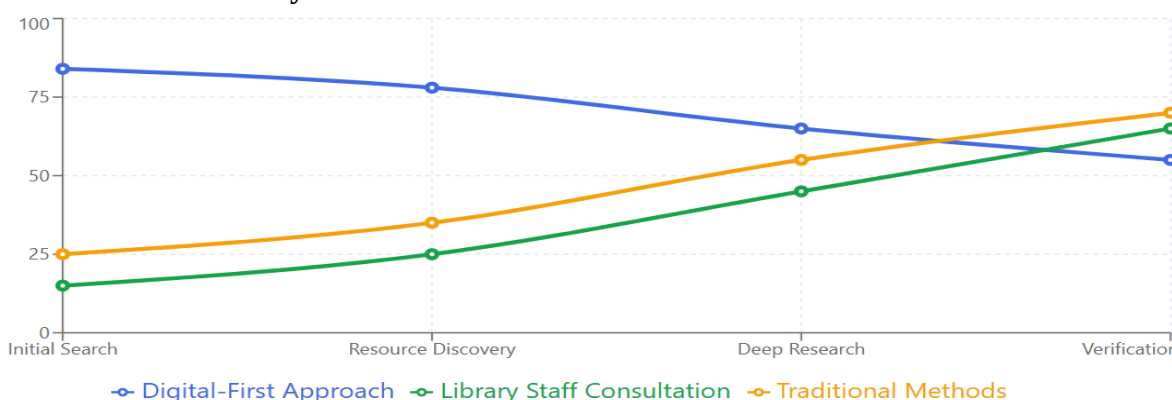


Figure 4: How preferences of Gen Z change throughout the research process

4.4 Discussion

84% of students begin research with Google, highlighting a strong preference for familiar, accessible platforms over traditional library resources. Slow internet connectivity emerges as the primary challenge (4.0 mean), significantly impacting research efficiency and user experience. Peer collaboration through social media and group chats (3.9 mean) shows the importance of community in academic research.

The findings confirm that Gen Z students at Bayero University prioritise speed,

convenience, and peer validation. Their reliance on Google and AI summaries (Pew, 2025) reflects a global shift in search behaviour. The low use of OPAC mirrors issues identified by IFLA (2023) and JISC (2023). Students' preference for peer support over librarians aligns with social learning trends (British Library, 2024). Infrastructure and literacy gaps remain critical, as shown by UNESCO (2021) and the World Bank (2022). Libraries must evolve from passive repositories to active learning partners. The preference for peer support over librarian assistance echoes

the social learning tendencies of Gen Z, who value collaboration and trust peer recommendations. This is consistent with findings from McKinsey (2025) on Gen Z's collaborative and digitally connected lifestyle. Despite their digital fluency, students face critical challenges—particularly in information literacy and infrastructure. Slow internet and poor awareness of resources hinder effective research, highlighting a disconnect between digital capability and academic competence. This reinforces the need for libraries to move beyond passive resource provision to active engagement and education.

5. CONCLUSION

Generation Z students, while highly proficient in digital navigation, exhibit limited engagement with academic library resources due to a combination of infrastructural limitations, usability issues, and gaps in information literacy. Their information-seeking behaviour is characterised by a preference for speed, convenience, and social collaboration, often at the expense of depth and scholarly rigour. Academic libraries must evolve to meet these changing expectations by enhancing digital infrastructure, redesigning user interfaces, and embedding information literacy into academic curricula. Failure to do so risks marginalising the library's role in the academic ecosystem.

5.1 Recommendations

i. Redesign Library Orientation Programs to Reflect Gen Z's Information-Seeking Patterns

(Aligned with Objective i: Analyse information-seeking patterns)

Given that most students begin their searches with Google and rely heavily on peer networks, traditional library orientations that focus solely on catalogues and databases are no longer sufficient. The library should develop contextual, digital-first orientation modules that meet students where they are—online. These should include short, engaging video

tutorials on transitioning from Google to academic databases, available via social media platforms like WhatsApp, Instagram, and YouTube. Additionally, peer-led induction sessions should be institutionalised to leverage the influence of social learning, encouraging students to share best practices in academic research.

ii. Modernise and Promote Academic Search Tools to Match Gen Z's Digital Expectations (Aligned with Objective ii: Examine preferred information search tools)

Since students prefer Google Scholar, mobile-friendly interfaces, and single-search platforms, the library must enhance the usability of its digital tools. This includes optimising the OPAC and library website for mobile devices, adopting a Google-like discovery layer (e.g., EBSCO Discovery Service or Primo), and integrating AI-powered chatbots (e.g., LibBot) to assist with instant queries. Furthermore, the library should embed search tools directly into Learning Management Systems (LMS) and course syllabi, making academic databases easily accessible during assignments. Regular promotional campaigns via SMS, email, and student portals should highlight the availability and benefits of these tools.

iii. Address Systemic Challenges Through Infrastructure Upgrade and Literacy Development

(Aligned with Objective iii: Identify challenges encountered)

The major challenges—slow internet, difficulty locating materials, and lack of awareness—require both technical and educational interventions. The university should partner with internet service providers to upgrade bandwidth and ensure stable, high-speed connectivity across library spaces. To improve navigation, clear signage, digital wayfinding apps, and QR-coded shelf labels should be introduced. Additionally, mandatory, credit-bearing information literacy courses

should be integrated into undergraduate curricula, focusing on keyword development, database navigation, and source evaluation. Librarians should also receive training to become more approachable and digitally visible through live chat, virtual office hours, and social media engagement.

These targeted recommendations, rooted in the study's findings, will help bridge the gap between Gen Z's digital behaviours and the academic library's service delivery, ensuring relevance, accessibility, and impact in the evolving educational landscape.

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