

Awareness and Utilization in the Use of the University of Baguio Library Online Databases

John Nigel C. Millare

jnmillare@e.ubaguio.edu
Baguio City, 2600, Philippines

Abstract

Driven by the vital role of these digital resources in post-pandemic academic research and remote learning, this study explored the awareness and utilization of the University of Baguio (UB) Library's online databases—World Book Online (WBO), EBSCO Academic Search Complete, and ProQuest Central—among 198 students and faculty during the First Semester of School Year 2023-2024. Examining utilization patterns reveals how often and effectively users engage with these tools, pinpointing barriers like interface complexity or content relevance that hinder adoption. Employing a quantitative cross-sectional survey design with a validated questionnaire. Online database awareness levels for World Book, EBSCO, and ProQuest were slightly aware, showing distinct patterns influenced by acquisition history, interface intuitiveness, and promotion—World Book Online leading due to its user-friendly design. Online database utilization remained minimal ("Not Utilized"), directly linked to slightly awareness and constraining academic productivity and research quality. A strong awareness-utilization emerged, framed by the Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA), wherein perceived usefulness and ease of use mediated engagement. Database utilization factors prioritized resource usefulness (rank 1), academic productivity (rank 2), and multidisciplinary access (rank 3), while lower ranks highlighted barriers like technical support (rank 10) and student attitudes (rank 11). Technical barriers, insufficient training, and preference for Google Scholar undermined return on investment for subscriptions. To bridge this gap, the study recommends a multi-pronged database marketing strategy: (1) "Database of the Month" campaigns via social media, QR-coded signage, and newsletters; (2) curriculum-integrated workshops and assignment templates requiring database citations; (3) upgrades for Wi-Fi and mobile access; (4) incentives like research challenges and faculty champions; and (5) bi-annual usage audits. These evidence-based interventions aim to elevate awareness and utilization, enhancing research productivity and positioning UB Library as a cornerstone of the university's scholarly ecosystem.

Keywords: Online databases; Online database awareness; Online database utilization; Database utilization factors; Database marketing strategies

1. Introduction

1.1. Background of the Study

The rapid advancement of information and communication technology has transformed the way academic communities' access and use information, shifting much of scholarly activity toward electronic resources and online databases. In university libraries, electronic information resources - such as e-books, e-journals, and specialized online databases - have become central components of the information infrastructure, providing

students, faculty, and researchers with 24-hour access to current, multidisciplinary, and often full-text scholarly materials. These resources not only support teaching and research but also help libraries respond more flexibly to space constraints and growing information demands (Velmurugan, 2025).

Online databases were developed primarily to address the limitations of print-based information systems amid the explosive growth of scholarly literature and the rise of internet infrastructure in the late 20th century. Traditional card catalogs and printed indexes proved inadequate for managing millions of annual publications across disciplines, prompting the creation of digital platforms that aggregate peer-reviewed journals, e-books, theses, and multimedia into searchable, centralized repositories. Key drivers included information overload requiring automated indexing, demands for 24/7 remote access beyond physical library constraints, cost efficiencies through digital subscriptions that eliminated printing and storage expenses, and technological evolution from bibliographic databases in the 1960s, CD-ROMs in the 1980s, to full-text web platforms by the 1990s.

Online databases have revolutionized academic libraries by providing curated, 24/7 access to authoritative, peer-reviewed resources—such as e-journals, e-books, and multimedia—essential for research, teaching, and critical inquiry. Unlike general web searches prone to misinformation and bias, library databases ensure credibility through expert-vetted content, advanced search filters (e.g., by author, date, subject), and full-text scholarly materials, enhancing research efficiency, accuracy, and depth. They support interdisciplinary knowledge creation, save time on literature reviews, and address space/physical constraints while maximizing ROI on subscriptions (John B. Cade Library, 2025).

For academic libraries, online databases serve as the cornerstone of modern information services, transforming static collections into dynamic knowledge hubs that enhance research, teaching, and institutional competitiveness. They provide curated, expert-vetted content with advanced filters—unlike general web searches prone to misinformation—ensuring scholarly credibility, research efficiency, and depth through full-text access and citation tracking (Carlton, 2025). These resources support interdisciplinary discovery, accelerate literature reviews for theses and publications, and maximize return on substantial subscription investments by serving stake holders and entire campuses without space limitations. Moreover, they foster information literacy through hands-on training, promote equity via remote access for underserved students, and correlate with higher research outputs and accreditation rankings, positioning libraries as vital partners in academic excellence (Colbongan-Papay & Colas, 2023).

Despite the recognized importance of online databases in higher education, several studies across different academic contexts reveal a persistent gap between availability and actual use. Investigations in African, Asian, and Middle Eastern universities have consistently identified issues such as low awareness, limited computer literacy, inconsistent internet connectivity, and inadequate training as major barriers to effective utilization of electronic information resources (Abera, et al., 2025). Similar patterns have been observed in Philippine academic institutions, where a number of studies report underutilization of subscribed databases despite significant institutional investments (Colbongan-Papay, et al., 2024). These findings underscore the need for regular, systematic assessments of how enrolled communities perceive and use licensed online resources, particularly in relation to cost, relevance, and support structures.

The University of Baguio (UB) Library exemplifies this digital shift, subscribing to World Book Online (WBO) in 2016, EBSCO Academic Search Complete in 2017, and ProQuest Central in 2023 to strengthen research programs amid surging demand for online resources. These tools have proven value in promoting academic rigor and publication success. Yet, global and local studies reveal widespread underutilization due to low awareness, skill gaps, and access barriers. At UB, research students and faculty—who rely on robust literature searches—often default to Google instead, risking inferior outputs. While these subscriptions advance knowledge creation and teaching quality, they also impose substantial financial costs on the library.

This study assesses the extent to which UB Library's online databases are known, used, and valued by students and faculty.

1.2. Literature Review

The advancement of information and communication technology made communication and access of information easier and faster. The rapid evolution of information and communication technology (ICT) has transformed how individuals' access and share information, making it faster, more accessible, and increasingly available beyond traditional library spaces (Ahmed & Buba, 2024). Electronic information resources include e-books, e-journal, and other computer based electronic networks, and among others. The most effective way to provide access to electronic books/journals in university libraries is through subscriptions to online databases which can be accessed through the internet which was found by Francis (2023) with higher usage than libraries. Online databases are collections of electronic information sources by publishers from various fields and disciplines. Examples of online databases are e-books, e-journals, and e-zines with some exclusive photos, sound recordings and videos which can be read, listened and viewed thru online available 24/7 with real-time updates. Due to the wide range of information provided by electronic resources, electronic resources became the backbone of academic libraries. It became so popular means of deriving information due to their flexibility in searching and accessibility anytime and anywhere compared to their paper-based counterpart. The widespread use of electronic information resources in universities is proof enough that the libraries are proactively involved in advancement and creation of knowledge among their stakeholders. One advancement of knowledge is the e-learning which can be accessed through electronic resources, considered by Gurusurthy & Padmamma (2023) affecting education in many ways. Aside from academic advantages of electronic resources, electronic resources can solve space barrier in the use of the library.

Internationally, several studies were conducted on the awareness and utilization of library databases ranging from full to low awareness and utilization. Ivwighrehweta & Eireyi-Fidelis (2022) pointed out that purposes of utilizing electronic academic databases includes research, writing seminar or conference papers, completing assignments or seminar presentations, and obtaining current information in relevant subject areas. The study of Norch & Adzakpa (2022) found that respondents primarily used electronic resources, especially the institutional repository UGspace, as their initial search point for online journals. High awareness stemmed from library training programs and fresher orientations. Postgraduate students purposefully accessed these resources for research, dissertations, assignments, and supporting literature, with the library serving as the main training source.

Low utilization of electronic resources at the Federal University of Technology resulted from inadequate staff training, poor power supply, slow or absent internet connectivity, high printing costs, insufficient computers, funding shortages, management bottlenecks, low computer literacy, lack of open access to current information, limited full-text availability, and poor management understanding of the digital age (Adayi, et al., 2020). Magaya & Kotoroi (2024) further added the underutilization of databases by post graduate students was due to lack of computer skills, slow network, inconsistent internet connectivity, power outage and irrelevant electronic information resources.

In Kano State, Abubakar and Haruna (2024) found that students have access to key electronic databases—ScienceDirect, ProQuest, JSTOR, EBSCOhost, and Hinari—that align well with their academic needs. However, satisfaction and availability levels remain moderate, averaging around 2.5 out of 5, due to gaps in content coverage, accessibility, and user experience that require targeted interventions. A significant statistical correlation exists between students' perceptions and their usage patterns, fostering positive attitudes despite persistent access barriers. The study recommends awareness campaigns and orientation programs to enhance

engagement. Wickramasinghe and Raza (2021) further added that students' interest in and exposure to databases influence their availability and awareness, while positive perceptions drive greater usage.

Lack of computer or internet was a major barrier in the utilization of electronic resources. For the majority to full awareness and utilization of electronic resources, these were reported in the following universities: ARRUPE College Library, the majority awareness and utilization library databases of the academic staff were mainly for research and educational activities and affected by non-access to the databases outside the campus, not functioning passwords to some databases, and issues bothering on internet connectivity (Patricia & Sibanda, 2021); in private university in Enugu State, Nigeria, Adayi, et al., (2023) revealed a full awareness and regular use of electronic resources by the academic staff for research purposes due to increased access to a wide range of books, current information and among other motivations; in the study of Haruna, et al. (2024) the most awareness and utilization of the faculty members on the different electronic resources were for research and teaching however, one third of the respondents were found not aware of the subscribed databases; in Bowen University, the high usage of electronic resources of the library among their post graduate students was attributed to their skill in the use of electronic information resources (Adekunle & Ojemola, 2021).

In Fountain University, Osun State, Adenariwo (2022) found that despite the fact that many Nigerian academic institutions have made the facility of e-libraries top agenda in their strategic plans, the adoption rate among students was still very limited due to inter alia, poor marketing strategies, lack of resources among the students and exorbitant data charges by Internet Service Providers (ISPs). Mwamasso & Onyango (2020) added that students encountered significant barriers to electronic resources, including computer shortages, electricity outages, and network issues. Most lacked the computer literacy and financial means to access these materials independently. The study concluded that inadequate infrastructure, limited computers, power and connectivity problems, low digital skills, and financial constraints hinder access in higher learning institutions, recommending ICT education from primary school onward, improved infrastructure, and financial aid for devices.

Further, the study established the following few hindrances that inhibited the effective use of the databases: no access to the databases outside the campus, often passwords to some databases not functioning, and issues bothering on internet connectivity. However, in Kumar & Hussain (n.d.), there was a surprisingly 100% of teachers and students who were aware about the major electronic resources but the utilization of these e-resources varied: the E-journals service was used by 20 (50%) teachers and 40(66.6%) students for their learning, research and teaching needs.

In Asia, particularly Pakistan, Humbhi et al. (2023) found that most faculty members were familiar with electronic resources (E-resources), whereas students' familiarity remained low. Key barriers included energy crises, slow internet speeds, and insufficient training or orientations for access and use. The researchers recommended improving internet facilities, ensuring reliable power supply, and offering institutional training to increase awareness and utilization. Another study of Nawaz, et al. (2022) at The Islamia University of Bahawalpur and Bahauddin Zakariya University Multan in South Punjab, revealed a strong statistical link between awareness and usage, though barriers such as slow internet, low ICT skills, and limited access persisted,

Abu-Dayeh & Aroui (2024) revealed in their study at Jordan, the moderate usage of e-learning resources among students at Prince University (PU). Statistically significant differences emerged by academic level, favoring third-year students and above, but no differences were found by gender or faculty. Researchers recommended training courses to optimize students' use of these resources.

Wade et al. (2025) established a Global Access Committee at a regional comprehensive university to support students and faculty at two partner campuses in China. Their 2022 survey revealed high student awareness, usage, and satisfaction with online library resources, instructional guides, tutorials, and the Ask a

Librarian service—yet self-reported utilization exceeded library statistics, possibly due to cultural differences and Mandarin translations. Similarly with the Chanda (2021), major findings revealed high awareness of e-resources among 52.81% of respondents, with e-books as the most utilized type. Smartphones were the preferred access device for 87.29% of users, while 53.49% reported high satisfaction with e-resources.

The Philippines is not exempt from the global trend toward advancing information and communication technology, particularly in terms of awareness and use of electronic resources in libraries. To assess the effective use of these resources, their utilization must be evaluated, as it is primarily influenced by user awareness. Capulong, et al. (2024) highlighted databases' superior search precision over unreliable websites, noting usage shifts toward online resources amid awareness gaps and recommending enhanced promotion of library services.

Palma, et al. (2023) found full awareness and frequent use of online library services among students of College of Education, Perpetual Help System Laguna, with higher awareness driving greater utilization and recommendations for ongoing user education. Overall, libraries should sustain these services through user education to help users adapt to changing information environments and maximize resource use. One study was conducted by Enriquez (2025) found moderate student awareness of library online services ($M=3.19$) and resources ($M=3.48$) but minimal use of commercial databases ($M=1.42$) and OER ($M=1.41$), with profile-based differences in utilization patterns. Furthermore, Panhilason found high awareness, frequent use, and satisfaction with online library resources, with demographic differences in awareness/satisfaction but a strong awareness-utilization correlation.

Asid (2022) identified low connectivity and staff competency gaps as challenges to online library delivery, while noting high satisfaction ($M=4.74$) with Western Mindanao State University library services and recommending enhanced e-resources, training, and partnerships.

The University of Baguio is also proactive on knowledge development brought by online resources. Hence, the online resources were made available to students and all its stakeholders to meet their academic and research needs in spite of its high cost. Due to the expensive cost of online resources aside from its importance in attaining the objectives of the library, specifically to embrace change and/or innovation by utilizing electronic-based information resources and to support the instructional and research programs of the institution by providing adequate library resources for the intellectual development of both students and faculty and the university as a whole, the concern of the library is also to determine the effective use of these online resources.

1.3. Conceptual Framework

Building on TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT), the study's framework operationalizes a sequential pathway as shown in Figure 1: Awareness → Utilization → Moderating Factors → Marketing Strategies.

The Technology Acceptance Model (TAM) posits that two primary factors—perceived usefulness (PU; the degree to which a technology boosts performance) and perceived ease of use (PEOU; the effort it requires)—directly shape users' attitudes, intentions, and actual adoption of information systems, including library electronic resources (Abuhassna et al., 2023). Extensively validated in library science, TAM explains persistent underutilization of online databases through PEOU barriers such as complex interfaces, inadequate training, and access friction, which erode PU perceptions and discourage repeated engagement—patterns directly mirrored in this study's top-ranked factors (user-friendliness, computer literacy, technical support).

The Modified Conceptual Model illustrates the relationship between users' awareness of university library databases and their level of utilization, while accounting for the influence of moderating factors and the role of marketing strategies. Awareness, defined as the users' familiarity with databases such as EBSCO

Academic Search Complete, ProQuest Central, and World Book Online, serves as the initial variable in the model and is measured using a four-point Likert scale ranging from not familiar to very familiar. This awareness is hypothesized to directly influence utilization, which refers to the extent to which these databases are used, categorized from not utilized to heavily utilized, and likewise measured through a four-point Likert scale. However, the model recognizes that the relationship between awareness and utilization is not linear, as it is affected by several moderating factors. These include infrastructure and access, user interface and features, resource quality, and support and literacy, all of which may either facilitate or hinder effective database use. For instance, even when awareness is high, limited access to technology or insufficient user skills may reduce actual utilization.

Furthermore, the model incorporates marketing strategies as an essential component aimed at enhancing both awareness and utilization. These strategies, which include awareness campaigns, training workshops, brochures and flyers, and social media promotion, are designed to address gaps identified in the moderating factors and to encourage greater engagement with the databases. Overall, the model proposes a dynamic process in which awareness leads to utilization, moderated by contextual factors, and strengthened through targeted marketing interventions.

Modified Conceptual Model

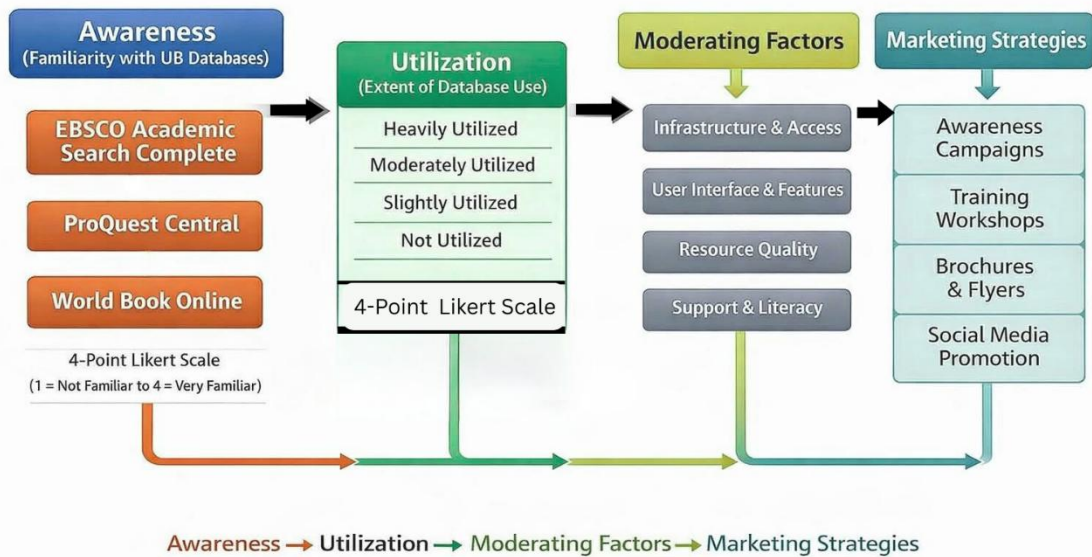


Figure 1. Schematic Diagram of the Study

1.4. Significance of the Study

School Administration. The results serve as a strategic basis for UB administration to monitor and evaluate the library's online resources, enabling data-driven oversight of usage metrics and ROI. They act as a control mechanism and decision aid for renewing, deferring, or expanding subscriptions to these and other databases,

ensuring alignment with the academic and research needs of students and faculty while optimizing budget allocation for existing collections.

University of Baguio Libraries. Considering the library's varied collections, the results provide baseline information for crafting targeted awareness and utilization programs for online resources, guiding the development of tailored promotions, training sessions, and integration strategies to maximize engagement across diverse user groups.

Librarian. The result of this study served as a guide for the librarians in subscribing to library online resources.

UB Library Stakeholders. This study gave them broader and deeper insights about the library online resources provided by the school, and it enabled them to extend the best support and understanding possible.

Future Researchers and Writers. This study was a noble contribution to the sparse literature on library awareness and utilization. Results therefore served as a reference for future researchers and writers to delve into replicate studies, with different assumptions, techniques, and methods.

1.5. Significance of the Study

The main objective of this study is to assess the University of Baguio library online databases, specifically:

1. To determine the level of awareness among students and faculty on the UB library online databases;
 - a. World Book Online (WBO)
 - b. Ebsco (Academic Search Complete)
 - c. Proquest Central
2. To determine the extent of utilization among students and faculty on the UB library online databases;
3. To find out the factors that affect utilization of the students and faculty on the UB library online databases;
4. To recommend marketing strategies that can be applied to increase the level of awareness and extent of utilization of the UB library online databases.

2. Methodology

2.1. Research Design

This study made use of a quantitative-cross-sectional survey research design. The cross-sectional research method described awareness and utilization of the chosen groups on library online databases using a survey questionnaire, as it was intended to determine the awareness and utilization of library online databases of the University of Baguio Library. The study was conducted online, using Google Forms.

2.2. Population of the Study

This study targeted faculty members and students who actively used the University of Baguio library during the First Semester of School Year 2023-2024. Excluded were library users from the graduate school's executive class and the School of Law due to their specialized schedules and unique access to separate legal and professional resources, which could skew the results from the general undergraduate populations.

A Google Forms questionnaire was distributed to all registered library users via email blast, with QR code links posted at circulation counters across college libraries. This approach targeted the accessible population

of UB students and faculty, maximizing reach without random selection. A total of 198 voluntary participants (faculty and students) completed the survey, as responses could not be compelled due to ethical considerations and reliance on self-selection. While the method aimed to exhaust possible respondents by leveraging multiple high-traffic channels during the First Semester of AY 2023-2024, the final count reflects natural attrition from low response rates common in voluntary online surveys (e.g., due to email fatigue or time constraints), achieving a practical yet representative baseline without full population saturation.

2.3. Data Gathering Tool

An adapted and modified questionnaire, validated by the research teacher through content review, served as the primary data-gathering tool. It consisted of four parts: Part I gathered respondents' personal information; Part II assessed awareness of UB Library's online databases (EBSCO Academic Search Complete, ProQuest Central, and World Book Online), adapted from Chinayo and Millare's (2019) study on senior high school students' utilization of UB's subscribed databases; Part III measured the extent of utilization of these databases; and Part IV identified factors affecting utilization, drawn from informal student interviews, related studies, literature, and library data. Responses were recorded on a four-point Likert scale, with 4 indicating the highest rating and 1 the lowest.

2.4. Data Gathering Procedure

Following ethical approval from the RIECO Office, permission from the VP ACAD Office, and informed consent from participants, the Google Form questionnaire was distributed via purposive sampling to library-using students and faculty during the First Semester of School Year 2023-2024. Voluntary participation yielded 198 complete responses over the entire semester collection period, supported by reminders. Data were subsequently exported, coded, cleaned, and prepared for descriptive statistical analysis.

2.5. Treatment of Data

Data for SOP1 and SOP2 were analyzed using descriptive statistics in Excel, where weighted means and standard deviations of responses from 198 respondents determined awareness and utilization levels of UB Library online databases. Mean scores were interpreted using the 4-point Likert scale in Table 2, with ranges and descriptors as follows: 4 (3.26–4.00, Much Aware/Utilized – exceptional mastery); 3 (2.51–3.25, Aware/Utilized – solid competence); 2 (1.76–2.50, Slightly Aware/Slightly Utilized – emerging familiarity); and 1 (1.00–1.75, Not Aware/Not Utilized – minimal engagement). Frequency counting was used in SOP3 to reveal rankings immediately.

Table 1 presents a 4-point Likert scale used to assess participants' awareness of database availability. It assigns arbitrary values to specific score ranges, with corresponding scale labels and descriptive interpretations that gauge levels of information and knowledge.

Table 1. Likert Scale for Awareness Levels

Arbitrary Values	Limits	Scale Label	Descriptive Interpretation
4	3.26 – 4.00	Much aware	Very well informed about the availability of the databases and very much knowledgeable about it.
3	2.51 – 3.25	Aware	Informed about the availability of the databases and much knowledgeable about it.
2	1.76 – 2.50	Slightly Aware	Limited information about the availability of the databases and least knowledgeable about it.

1	1.00 – 1.75	Not Aware	Not informed about the availability of the databases and no knowledge about it.
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Table 2 outlines a 4-point Likert scale for evaluating participants' utilization of online databases. It maps arbitrary values to score ranges, scale labels, and descriptive interpretations based on usage frequency.

Table 2. Likert Scale for Utilization Levels

Arbitrary Values	Limits	Scale Label	Descriptive Interpretation
4	3.26 – 4.00	Much Utilized	You use the online databases twice a month. There is evidence of high extent of utilization of online databases.
3	2.51 – 3.25	Utilized	You use the online databases once a month. There is evidence of moderate extent of utilization of online databases.
2	1.76 – 2.50	Slightly Utilized	You use the online databases once a semester. There is evidence of slight extent of utilization of online databases.
1	1.00 – 1.75	Not Utilized	Never tried or used at all the online database. There is no evidence of utilization of online databases.

Marketing strategies (SOP 4) to enhance awareness and utilization of UB Library online databases were developed based on findings from SOP 1–3, prioritizing top-ranked factors (user-friendly interfaces, technical support, accessibility) and school-specific patterns from awareness/utilization results.

2.6. Ethical Considerations

Ethical considerations were upheld throughout the study to protect participants' rights and safety. These principles were embedded in the questionnaire, which clearly outlined the research purpose, voluntary nature of participation, and participants' right to withdraw at any time without consequence. Informed consent was obtained from all respondents prior to data collection.

To ensure confidentiality and data security, responses were anonymized, and the Google Form was deleted after data processing and export. Findings are available from the researchers upon request and will be disseminated through paper presentations and publication.

3. Results and Discussion

This section presents the results and discussion on faculty and students' awareness and utilization of UB Library online databases, the factors affecting their use, and the marketing strategies to improve awareness and utilization.

3.1. Awareness on the UB Library Online Databases

Assessing awareness levels establishes the prerequisite knowledge foundation for database utilization, as unfamiliarity consistently predicts underuse in academic libraries.

Table 3 presents the level of awareness among respondents- students and faculty library users, regarding key UB Library online databases, based on mean scores and standard deviations.

Table 3. Level of Awareness on UB Library Online Databases

Data Base	Mean	SD
EBSCO Academic Search Complete	2.04	0.23
ProQuest Central	1.96	0.37
World Book Online	2.25	0.39
Overall Mean	2.08	0.33

The overall mean of 2.08 reflects only slight awareness of UB Library online databases, indicating limited information about the availability of the databases and suggesting that respondents are least knowledgeable about them. This trend aligns with Enriquez (2025), who noted that institutional resource availability often fails to correlate with student awareness. Similarly, Ilori et al. (2021) highlighted that students frequently bypass sophisticated library databases due to a lack of familiarity. This phenomenon is further supported by Adewole-Odeshi and Jumba (2019), who found that user knowledge of digital repositories is often modest rather than comprehensive. Finally, as Weingart and Anderson (2000) observed, this persistent gap in awareness remains a long-standing challenge for academic institutions regardless of technological advancements.

World Book Online achieved the highest score at 2.25, followed by EBSCO Academic Search Complete (2.04) and ProQuest Central (1.96). Although awareness remained slight across all databases, respondents showed comparatively greater cognizance of World Book Online. This slight awareness likely arises from interconnected factors, including insufficient promotion via orientations, as Lasig (2021) found that library orientations significantly influence the utilization of electronic resources, suggesting that gaps in awareness often stem from a lack of formal introductory packages for fresh students. Accessibility issues that may include complex logins and poor internet, preference for simpler tools like Google, inadequate training, and demographic gaps among newer or less tech-savvy users. Research by Zhu, et al. (2025) highlights that complex login protocols and inadequate technological infrastructure remain "interrelated hurdles" that prevent students from recognizing the full value of subscription databases.

Slightly awareness in database exacerbates inequities where only digitally "savvy" users benefit, while others remain excluded from high quality information (Calhoun & Zhu, 2023); and it signals broader underutilization of library services, which may erode institutional support for library programs; and it ultimately hampers institutional research output and students' career ready information literacy skills (Colbongan-Papay & Colas, 2023).

World Book Online showed the highest awareness level among the surveyed databases, with a mean score of 2.25 ("slightly aware"), underscoring an informed about the availability of this database and much knowledgeable about it despite the general trend from 198 library-using faculty and students at the University of Baguio. This edge stems from its intuitive, image-based navigation, interactive multimedia (videos, games), and anytime-anywhere access, making it more engaging for general reference across educational levels than text-heavy scholarly tools (World Book, n.d.). Age-tiered modules (Kids, Student, Advanced), text-to-speech features, and 100+ language translations further enhance its appeal, while vendor tools like lesson plans integrate it into curricula, driving familiarity in academic settings (Fort Bend County Libraries, 2024).

Unlike scholarly platforms like EBSCO Academic Search Complete (mean 2.04) and ProQuest Central (mean 1.96), which often face usability hurdles such as complex searches and authentication barriers (Calhoun & Zhu, 2023), World Book Online's intuitive design fosters greater adoption among students and casual users (Nguyen et al., 2023). These scores place EBSCO and ProQuest in the "slightly aware" range

(1.81-2.60) on Philippine library scales, trailing World Book Online (2.25)—likely UB Library's earliest acquisition—due to limited promotion and training. Lower familiarity with article-focused databases reflects patterns among non-expert users (Balicat, 2025), risking underutilization amid access challenges prevalent in Philippine libraries (Palma et al., 2023). Targeted orientations, demos, and curriculum integration could elevate recognition.

3.2. Utilization of the UB Library Online Databases

Table 4 presents the utilization of UB Library online databases, quantifying engagement levels with key resources—EBSCO Academic Search Complete, ProQuest Central, and World Book Online—among the 198 respondents. Overall utilization is predominantly low, with a mean score of 1.73, falling in the "Not Utilized" range and indicating minimal to no evidence of utilization of online databases. This finding is consistent with recent studies showing that despite the availability of academic databases, student usage remains limited due to factors such as lack of awareness, insufficient information literacy skills, and preference for general search engines (Habib, et al., 2026).

Similarly, Mulla and Chandrashekara (2023) reported that many students underutilize subscription-based databases, relying instead on freely accessible web resources, which contributes to low engagement metrics. Furthermore, research by Magaya & Kotoroi (2024) highlights that students often struggle with navigating academic databases, leading to reduced usage even when access is readily available. These findings support the observed low utilization in the present study.

Table 4. Extent of Utilization on UB Library Online Databases

Data Base	Mean	SD
EBSCO Academic Search Complete	1.66	0.34
ProQuest Central	1.53	0.31
World Book Online	2.00	0.35
Overall Mean	1.73	0.33

This limited to nonexistent engagement with databases such as EBSCO Academic Search Complete, ProQuest Central, and World Book Online aligns with the respondents' low awareness levels (World Book Online: 2.25; EBSCO: 2.04; ProQuest Central: 1.96), as unfamiliarity has been shown to discourage access and use of digital library resources. Within the framework of the Technology Acceptance Model (TAM), low awareness constrains both perceived usefulness (PU) and perceived ease of use (PEOU), which are key determinants of system adoption (Basiran & Yusof, 2021). "Not Utilized" (overall mean 1.73) hinders research productivity and academic performance among UB faculty and students by limiting access to scholarly resources for literature reviews and publications. The strong awareness-usage correlation—where means below 2.6 curb engagement—aligns with Philippine library patterns and models like TAM (PU and PEOU) and TRA (attitudes, norms), exacerbated by training gaps and poor interfaces (Enriquez, 2025).

Moreover, barriers related to PEOU—such as complex database interfaces, authentication difficulties, slow internet connectivity, and limited user training—further reduce the likelihood of utilization. Empirical studies in academic library contexts, including those in developing countries, indicate that such access and usability challenges significantly hinder database adoption and reinforce reliance on simpler search tools (Iqbal, 2023). In line with the Theory of Reasoned Action (TRA), negative user attitudes shaped by these barriers can lead to low behavioral intention to use library databases. Evidence from Philippine academic libraries similarly highlights that lack of awareness, inadequate training, and technological constraints are persistent factors limiting effective use of subscribed e-resources (Estrada, et al., 2023). Therefore, targeted interventions such

as user orientations, hands-on training, and improved access infrastructure are essential to bridge these gaps and enhance database utilization.

Overreliance on general search engines such as Google—particularly when sources are not critically evaluated—can weaken the quality of theses, publications, and other academic outputs, as these platforms often prioritize accessibility and ranking algorithms over scholarly rigor. Studies show that students frequently default to easily retrievable web content rather than vetted academic databases, which may result in the use of incomplete, outdated, or non-peer-reviewed materials (Head et al., 2020). This pattern is associated with lower research quality and weaker argumentation due to limited engagement with authoritative sources. In contrast, subscription-based databases provide curated, peer-reviewed, and discipline-specific content that supports more rigorous academic work.

Technical barriers such as unreliable campus internet, authentication glitches, and poor mobile compatibility discourage exploration that results to low utilization, particularly in resource-constrained environments like the Philippines (Villaseñor, 2023). These findings align with broader studies showing that awareness deficits stem from inadequate information literacy programs, underscoring the need for targeted interventions to bridge the gap (Olipas & Alegado, 2025).

Addressing this gap requires targeted and sustained interventions. Workshops, live database demonstrations, and embedded information literacy instruction have been shown to significantly improve students' confidence and frequency of database use (Opdahl, 2024). At the same time, infrastructure improvements—such as stable internet connectivity, simplified remote access, and mobile-friendly platforms—help reduce perceived ease-of-use (PEOU) barriers that discourage engagement. Ensuring that library subscriptions align with users' academic needs further increases perceived usefulness (PU), a key determinant of adoption under the Technology Acceptance Model.

Institutional awareness campaigns also play a critical role. Evidence suggests that consistent promotion and integration of databases into coursework can shift usage patterns from minimal to at least “low utilization” levels, as observed in comparable higher education settings (Penta, 2022). Capulong et al. (2024) further emphasize that increasing public awareness enables users to better appreciate databases' advantages, including efficient search functionalities, structured filtering tools, credible indexing, and guided access to scholarly materials. Collectively, these strategies can foster more informed research behaviors and gradually improve overall database utilization.

3.3. Factors Affect Utilization of the Students and Teachers on the UB Library Online Databases

Table 5 reveals the identifying key factors affecting utilization of UB Library online databases, based on frequency responses from 198 student and faculty users. The top three factors are: (1) Usefulness of resources (relevant to my academic and research needs), (2) Academic productivity (timely and up-to-date information resources), and (3) Easier access to wider range of information (multi-disciplinary).

Table 5. Factors Affecting Utilization of the UB Online Databases

Indicators that Affect Utilization		Frequency (n=198)	Rank
1.	Usefulness of resources (relevant to my academic and research needs)	184	1
2.	Easier access to wider range of information (multi-disciplinary)	170	3
3.	Accessibility of online databases	178	4
4.	Academic productivity (timely and up-to-date information resources)	175	2
5.	User-friendly (interface of the online database)	162	5
6.	Fast internet access (when accessing online database within UB premises)	159	6
7.	Convenience features (tools in downloading, share, cite, print)	155	7
8.	Access to computers	152	8

9. Computer literacy	145	9
10. Promptness of Technical Support (assistance of staff to access)	138	10
11. Attitude of the students	132	11

The top three factors identified in Table 5—usefulness of resources (relevant to academic and research needs), academic productivity (timely and up to date information resources), and easier access to a wider range of information (multi disciplinary)—suggest that UB Library online database utilization is strongly driven by perceived academic benefit and convenience, which is consistent with the broader discourse on electronic information resources in academic libraries. The emphasis on “usefulness” resonates with Francis (2023), who found that subscriptions to online databases have become the most effective way to provide access to electronic books and journals, particularly because they align closely with teaching, learning, and research demands in higher education (Francis, 2023). This is further corroborated by Ivwighrehweta & Eireyi Fidelis (2022), whose study shows that students and faculty primarily use electronic academic databases for research, assignments, seminar papers, and current subject area information, underscoring that resources are valued when they are directly relevant to academic tasks.

The second factor - “academic productivity” tied to timely and up to date information—aligns with literature demonstrating that electronic resources enhance research output and scholarly activity. Adenariwo (2022) and Mwamasso & Onyango (2020) both note that despite institutional investments in e libraries, the effective use of these resources depends on how well they support current research and teaching; when access is stable and resources are current, utilization increases and academic productivity improves. Similarly, Wade et al. (2025) reported high student awareness, usage, and satisfaction with online library resources, instructional guides, and research support services, indicating that contemporary, well integrated e resources directly contribute to efficient and productive academic work.

Finally, the preference for “easier access to a wider range of information (multi disciplinary)” dovetails with global evidence that access, awareness, and user experience are central to utilization patterns. The literature review shows that slow or inconsistent internet, non functioning passwords, and lack of off campus access inhibit use, even when users are aware of databases (Adayi et al., 2020; Patricia & Sibanda, 2021). In contrast, Palma et al. (2023) and Enriquez (2025) highlight that higher awareness and user education lead to more frequent use of online library services, while Humbhi et al. (2023) and Nawaz et al. (2022) stress that training, reliable connectivity, and improved ICT skills are necessary to bridge the gap between awareness and actual utilization. Thus, the prominence of these three factors in Table 5 implies that the UB Library should prioritize strengthening the relevance of its subscribed databases to teaching and research, ensuring stable and off campus access, and sustaining robust user education programs so that the perceived usefulness and ease of access translate into consistently high utilization.

The finding that the least influential factors are (11) attitude of the students, (10) promptness of technical support, and (9) computer literacy suggests that, for this user group, perceived relevance and access to content matter more than personal attitudes or skill level concerns when it comes to using UB Library online databases. This implies that users likely treat these resources as practically necessary tools for their academic tasks, so even if they are not highly confident in their computer skills or if they occasionally experience delays in technical support, they still engage with the databases as long as the materials are useful and relatively easy to reach. At the institutional level, it signals that the library can prioritize strengthening resource quality, relevance, and stable access over intensive attitude changing campaigns or over specialized technical support protocols, without precipitously losing utilization.

This pattern is consistent with the literature review, which shows that awareness and infrastructural barriers—such as poor internet, non functioning passwords, and lack of off campus access—are more decisive in shaping utilization than underlying attitudes or baseline computer literacy (Adayi et al., 2020; Patricia & Sibanda, 2021). Studies in Nigerian and Philippine universities likewise reveal that when users are aware of e

resources and can access them, utilization increases even in the presence of moderate digital skills gaps, indicating that practical opportunity to use outweighs low self perceived computer literacy (Mwamasso & Onyango, 2020; Palma et al., 2023; Enriquez, 2025). Moreover, the prominence of “usefulness” of databases—ranking highest—stems from their direct relevance to academic and research needs, enabling targeted discovery that augments print collections, much like how specialized ProQuest and EBSCOhost offer extensive scholarly content and fulfill niche academic queries (Colbongan Papay et al., 2024). In contrast, factors such as student attitude, promptness of technical support, and computer literacy, while theoretically important, appear here as secondary concerns, reinforcing the idea that when resources are relevant and accessible, users are willing to work around attitudinal or technical imperfections, a pattern consistent with broader technology acceptance research in academic settings (Joo & Choi, 2015; as reflected in related TAM based studies).

3.4. Marketing Strategies to Increase Awareness and Utilization of the UB Library Online Databases

Amid low awareness, negligible utilization, and key barriers like training gaps and interface intimidation among 198 UB users, this section proposes evidence-based strategies to boost awareness and usage of UB Library Online Databases. Grounded in the Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA)—which emphasize perceived usefulness, ease of use, and social norms reinforced by institutional efforts—these interventions directly counter study findings by bridging the awareness-utilization chasm through promotional, instructional, and technical measures, as validated by research.

Awareness Campaigns. This awareness utilization gap can be addressed through systematic promotional, instructional, and technical interventions that align with the Technology Acceptance Model (TAM) and the Theory of Reasoned Action (TRA), wherein perceived usefulness and perceived ease of use, reinforced by social norms and institutional support, mediate actual database adoption. Launch recurring "Database of the Month" campaigns to spotlight one platform at a time, using eye-catching banners on the library website, in-library signage with QR codes, and email newsletters. Feature real-user testimonials showing how EBSCO streamlined thesis research or ProQuest aided lesson planning. Track exposure via click analytics to refine reach, countering users' default to free tools like Google Scholar by proving superior relevance and features. Such campaigns should be complemented by short, engaging video tutorials that illustrate concrete search scenarios, citation features, and export tools, thereby reducing the intimidation associated with complex interfaces and countering the tendency of users to default to free alternatives like Google Scholar. Academic libraries have likewise found that integrating digital marketing tools—such as social media analytics and targeted messaging—substantially improves both awareness and usage of virtual reference services and online databases, underscoring the importance of a sustained, data informed communication effort.

Training Workshops. Embed database instruction in the curriculum through library-faculty partnerships. Offer orientation modules, subject-specific workshops (e.g., "Advanced EBSCO for Humanities"), and course-integrated assignments requiring ProQuest citations. Keep sessions short (30-45 minutes) with hands-on demos of search filters, citation exports, and mobile access. Pair with "Database Champions"—faculty advocates who co-host and share success stories—to build social norms and perceived usefulness. Equally important is the integration of database instruction into the academic curriculum so that electronic resources become an embedded component of research and teaching practices rather than an optional add on. Library faculty collaboration can yield orientation modules, subject specific workshops, and course embedded assignments that require students to locate and cite materials from EBSCO, ProQuest, or World Book Online, thereby reinforcing the perceived usefulness of these tools for term papers, theses, and lesson planning. These efforts should be paired with clear, discipline tailored guides and quick reference handouts that demystify

advanced search features, filters, and citation managers, which research indicates are critical enablers of higher utilization in academic settings.

Brochures & Flyers. Distribute concise, discipline-tailored guides and quick-reference flyers at orientations, classrooms, and high-traffic areas. Include visuals of search scenarios, QR-linked video tutorials (e.g., "Export Citations in 60 Seconds"), and troubleshooting tips for authentication issues. Design for mobile scanning with bold icons demystifying advanced features, directly addressing user-friendliness barriers and boosting repeated use.

Social Media Promotion. Leverage targeted posts on platforms like Facebook, Instagram, and TikTok with short reels demonstrating "ProQuest vs. Google" comparisons or World Book infographics for quick facts. Use polls ("Which database helped your last paper?") and stories with swipe-up links to drive logins. Analytics-guided scheduling ensures peak student engagement, amplifying social proof and ease of access while monitoring metrics like shares and logins.

Finally, improving infrastructure—such as stabilizing campus internet connectivity, streamlining authentication procedures, and ensuring mobile compatibility—addresses the technical barriers that erode perceived ease of use and discourage repeated engagement with subscription databases.

4. Conclusion and Recommendation

4.1. Conclusion

Based on the result of the study the respondents are incognizant on UB Library's databases—World Book Online, EBSCO Academic Search Complete, and ProQuest Central, with many respondents largely unfamiliar with their availability and capabilities. This limited familiarity directly translates into widespread underutilization, even as World Book Online benefits from marginally higher recognition owing to its intuitive interface and prominent visibility on the library portal, while EBSCO and ProQuest trail significantly due to insufficient promotion and outreach efforts. Consequently, this underuse constrains academic productivity, diminishes research quality, and compels users to rely on inferior free alternatives like general search engines. Respondents consistently prioritize content relevance, breadth, and currency over technical support features, underscoring the critical need for compelling value messaging, user-friendly access pathways, and proactive marketing to bridge these gaps. Therefore, the subscribed databases must be continuously aligned with the actual teaching, learning, and research needs of students and faculty, ensuring that the content remains current, credible, and directly relevant to their academic tasks. User education may be intensified by librarians—through workshops, course integrated instruction, and research consultations—to demonstrate how these databases are used to enhance productivity and support multi disciplinary work.

To counter persistent underutilization despite substantial institutional investments, immediate, multifaceted interventions are essential: multi-channel awareness campaigns via social media, newsletters, and in-library displays; curriculum-embedded training workshops; intuitive interface redesigns with single-sign-on access; faculty-driven promotion integrated into syllabi and research assignments; and robust ongoing usage monitoring through analytics dashboards. Grounded in the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and ease of use, and the Theory of Reasoned Action (TRA), which links attitudes to behavioral intentions, these strategies will cultivate stronger user engagement and adoption.

In the resource-constrained context of Philippine higher education, maximizing existing subscriptions is not just prudent but imperative. Deliberate, sustained action will elevate UB Library's databases from underutilized assets to indispensable pillars of teaching, learning, and research excellence.

4.2. Recommendation

Based from the conclusion, the study provided the following recommendations:

1. Launch Multi-Channel Awareness Campaigns. Librarians lead a "Database of the Month" program with website banners, QR-coded posters in high-traffic areas (faculty-assisted placement), social media Reels (e.g., 1-minute search demos by librarians), and faculty-targeted emails.
2. Embed Training in Curriculum. Librarians partner with faculty and department chairs/deans for mandatory orientations in research courses, discipline-specific workshops (e.g., "EBSCO for Nursing Theses" led by subject librarians), and assignment templates requiring ProQuest/EBSCO citations. Faculty provide bilingual quick-start guides to enhance computer literacy and perceived ease of use.
3. Simplify Access and User Experience. MIS staff collaborates with librarians to upgrade Wi-Fi stability, streamline logins and mobile access, and set up peak-period help desks staffed by librarians. Develop vendor-supported tutorials for ProQuest's advanced features, reducing interface barriers.
4. Incentivize Adoption Through Social Proof. Librarians launch "Database Challenge" contests with e-certificates and badges for citation submissions. Faculty serve as champions per school to share success stories; librarians publish user testimonials in newsletters, leveraging subjective norms.
5. Monitor and Iterate Annually. Librarians conduct bi-annual surveys on awareness and utilization, analyzed alongside COUNTER stats with MIS support. Prioritize high-ROI databases with user-friendly features, targeted promotion, and visual navigation.
6. Call to Action. The Schools and Offices are urged to adopt these recommendations for maximum impact.

Acknowledgements

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Appendix A. Questionnaire

Dear Respondent,

The undersigned is currently undertaking research, entitled: Assessment of the University of Baguio Online Databases.

May I request you to be one of my respondents. Your honest answer is very much appreciated. Rest assured that all will be kept confidential. Thank you.

John Nigel Millare (sgd.)

Part I.

Personal Information

Directions: Please put a check (/) mark on the space provided which best describes you and write the information asked for.

Student: Course & Year Level: _____

Teacher: School: _____

Part II. Level of Awareness on the UB Library online databases

Directions: Please rate the level of your awareness on the following UB online databases by putting a check (/) mark on the column corresponding to your rating guided by the following scale:

Score	Scale	Qualitative Interpretation	Descriptors
4	3.26-4.00	Much Aware	Very well informed about the availability of the databases and very much knowledgeable about it.

3	2.51-3.25	Aware	Informed about the availability of the databases and much knowledgeable about it.
2	1.76-2.50	Slightly Aware	Limited information about the availability of the databases and least knowledgeable about it.
1	1.00-1.75	Not Aware	Not informed about the availability of the databases and no knowledge about it.

	Level of Awareness			
UB online databases	4	3	2	1
a. Ebsco-Academic Search Complete				
b. ProQuest Central				
c. World Book Online				

Part III. Extent of Utilization on the UB Library online databases

Directions: Please rate to what extent do you utilize the UB online databases by putting a check (/) mark on the column corresponding to your rating guided by the following scale:

Score	Scale	Qualitative Interpretation	Descriptors
4	3.26-4.00	Much Utilized	You use the online databases twice a month
3	2.51-3.25	Utilized	You use the online databases once a month
2	1.76-2.50	Slightly Utilized	You use the online databases once a semester
1	1.00-1.75	Not Utilized	Never tried or used at all the online database

	Extent of Utilization			
UB online databases	4	3	2	1
a. Ebsco-Academic Search Complete				
b. ProQuest Central				
c. World Book Online				

Part IV. The following are the factors that may affect your utilization of the UB Library online databases

Directions: Please check those factors that are applicable to you, (check as many as it applies to you)

Factors that affect utilization of the UB online databases	
1. User-friendly (interface of the online database)	
2. Computer literacy	
3. Promptness of Technical Support (assistance of staff to access)	
4. Access to computers	
5. Accessibility of online databases	
6. Easier access to wider range of information (multi-disciplinary)	
7. Fast internet access (when accessing online database within UB premises)	
8. Usefulness of resources (relevant to my academic and research needs)	
9. Academic productivity (timely and up-to-date information resources)	
10. Convenience features (tools in downloading, share, cite, print)	
11. Attitude	
12. Others: please specify	

Thank you very much!