

Measuring Value Beyond Subscriptions: Evidence-Based Evaluation Of E-Resource Usage in An Academic Library

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Abstract:

This study evaluates the institutional value and utilization patterns of online academic databases among students and faculty, focusing on search term analytics, database engagement levels, and disciplinary variations. Usage data from multiple EBSCO-hosted platforms were analyzed for the 2024 and 2025–2026 academic periods to identify trends in digital resource interaction. The findings reveal that database engagement is heavily dictated by academic requirements, with senior high school and education students emerging as the most frequent users. Several specialized databases remain underutilized despite their availability, suggesting a disconnect between current collection offerings and specific curricular needs. These results underscore the necessity of aligning electronic resource procurement with instructional strategies to ensure a higher return on investment and more effective research support.

Keywords: Evidence-based librarianship, electronic resource usage, COUNTER metrics, academic databases, collection development

INTRODUCTION

Academic libraries in the 2020s are navigating a rapid trend toward digital transformation, where scholarly databases and multimedia collections have superseded print as the primary conduits for research and instruction. In the Philippines, the Commission on Higher Education (CHED) and various library consortia have actively promoted the modernization of library systems to align with international standards of digital excellence (Rosales, 2024). However, a persistent issue facing these institutions is the rising cost of subscriptions coupled with the "discovery–use gap," where high search activity does not consistently translate into meaningful content retrieval. The core problem at many universities remains the chronic underutilization of specific high-cost databases, often caused by misaligned curriculum needs and a lack of advanced search skills among users (Adeniran, 2011; Vrana, 2022). Librarians often find themselves maintaining expensive subscriptions that offer significant theoretical value but fail to generate actual academic engagement within their specific institutional context.

This study addresses these challenges through a comprehensive, evidence-based evaluation of EBSCO-hosted database usage. Analyzing standardized COUNTER metrics alongside user search behaviors allows for a deeper understanding of how students and faculty interact with digital content. This research



identifies high-value resources and underutilized collections, providing a data-driven solution for institutional collection management and instructional integration. The findings ultimately offer a roadmap for optimizing library budgets and ensuring that electronic resources serve as effective catalysts for scholarly success.

Conceptual Framework

This study is anchored in the principles of Evidence-Based Librarianship (EBL), which advocates for integrating the best available empirical evidence with professional expertise to inform library decision-making. Originating from the evidence-based practice movement in healthcare, EBL emphasizes the systematic use of data—such as usage statistics, performance indicators, and assessment outcomes—to guide collection development and resource management. In the context of electronic resources, EBL shifts evaluation from assumptions about value based on availability or prestige toward demonstrable patterns of use, relevance, and impact. The present study operationalizes EBL as a framework for assessing the real value of e-resources beyond subscription status by examining actual usage metrics.

The study is further informed by COUNTER-compliant usage measurement, which provides standardized metrics for evaluating electronic resource use across platforms. The COUNTER Code of Practice establishes consistent definitions for indicators such as sessions, searches, and full-text requests, enabling reliable comparison and longitudinal analysis. These metrics serve as proxies for different levels of user engagement, ranging from discovery to meaningful use (Echeverria & Bustamante, 2025).

Finally, the framework draws from information-seeking behavior theory, particularly models that distinguish between information discovery and information use. Scholars such as Wilson (1999) and Ellis (1989) argue that information behavior is shaped by contextual, disciplinary, and cognitive factors, and that access does not automatically lead to use. In this study, user group affiliation and database type are treated as contextual variables influencing information behavior, while usage indicators represent observable outcomes of that behavior.

Literature Review

Contemporary scholarship emphasizes the transition toward Evidence-Based Librarianship (EBL), a framework that prioritizes empirical data over traditional intuition-based collection management. Recent research by Echeverria and Bustamante (2025) highlights that the adoption of the COUNTER R5 standard has been pivotal in this transition, providing librarians with granular insights into the "discovery–use gap"—the disparity between initial search queries and actual content retrieval. This data-driven approach allows for a more transparent justification of resource expenditures by linking subscription costs directly to demonstrable user engagement.

In the Southeast Asian context, and specifically within the Philippines, the utilization of these resources is heavily influenced by disciplinary demands and instructional design. Rosales (2024) observed that students in research-intensive programs, such as health sciences and teacher education, exhibit significantly higher rates of database interaction compared to their peers in technical or general education streams. Furthermore, studies into modern information-seeking behavior indicate that while digital natives



are proficient in basic search functions, they often struggle with the complex search strategies required to navigate scholarly databases effectively (Vrana, 2022).

The relationship between search intent and successful information retrieval remains a critical area of concern for academic practitioners. Scholarship from the last few years suggests that "surface-level" engagement—characterized by broad, unstructured queries—frequently fails to translate into the retrieval of full-text scholarly articles. This phenomenon underscores the ongoing importance of information literacy programs that bridge the gap between discovery and meaningful use. As noted by current academic discourse, the value of an electronic resource is no longer defined by its presence in a library's portfolio but by its active role in supporting the research and learning workflows of its specific user community.

Beyond technical access, the psychological and cognitive aspects of digital resource engagement have gained increased attention in recent literature. Faculty involvement and "gatekeeper" influence are often cited as essential factors in moving students from exploratory browsing to evidence-based retrieval. When electronic resources are not explicitly embedded within course requirements, students tend to default to general web searches, which lack the peer-reviewed rigor of library-subscribed databases. Recent evaluative studies suggest that libraries must transition from being passive providers of content to active partners in the pedagogical process, ensuring that the resources they fund are strategically aligned with the institution's specific learning outcomes.

The financial sustainability of e-resource collections is also a recurring theme in contemporary library management studies. With the rising cost of academic bundles and the emergence of open-access alternatives, librarians are increasingly required to provide evidence-based justifications for maintaining high-cost subscriptions. Metrics such as cost-per-use and content-conversion rates are now standard benchmarks for evaluating whether a database provides sufficient institutional value (Schöpfel & Leduc, 2023).

Ultimately, the shift toward evidence-based evaluation allows for a more dynamic and responsive collection development strategy. Libraries are no longer static collections but are instead evolving ecosystems that respond to real-time data on user behavior and academic trends (Zhang & Zhao, 2021). The integration of advanced analytics into library management systems provides the necessary evidence to prune underutilized collections and reinvest in platforms that demonstrate high engagement and retrieval rates.

Research Questions

1. What are the patterns of electronic resource usage across different user groups in the academic library in terms of sessions, searches, and content retrieval (full-text and abstract access)?
2. Which subscribed electronic resources demonstrate high, moderate, or low value based on actual usage indicators, and how do these usage patterns inform evidence-based collection management decisions?
3. How do user search behaviors relate to actual content retrieval, and what does this reveal about the effectiveness of database use?



METHODOLOGY

Research Design

This study employed a descriptive–evaluative research design using COUNTER-compliant usage statistics and search analytics to measure the value of subscribed electronic resources beyond mere availability. The design integrates bibliometric usage analysis and user behavior assessment to determine how discovery translates into scholarly engagement.

Sources of Data

Three institutional datasets were analyzed to provide a comprehensive understanding of electronic resource use within the academic library.

First, the Most Frequently Searched Terms Report was utilized to capture user intent and information-seeking behavior. This dataset offers insight into the types of topics and keywords that users actively pursue, thereby reflecting their academic needs, interests, and search patterns.

Second, the EBSCO Usage Dataset (2024) served as the baseline dataset. It represents the initial year of observation and reflects early adoption patterns of electronic resources across different user groups. This dataset establishes a reference point for evaluating levels of engagement in terms of sessions, searches, and content retrieval.

Third, the EBSCO Usage Dataset (2025–2026) was analyzed as a follow-up dataset. It enables the identification of trends, continuity, or changes in user engagement over time. The study is able to assess growth, decline, or shifts in usage behavior, thereby providing a longitudinal perspective on electronic resource utilization by comparing this dataset with the 2024 baseline.

Together, these datasets allow for a multi-dimensional analysis that links user intent (search terms), actual usage behavior (sessions and searches), and evolving engagement patterns over time.

Data Analysis

Data were organized and aggregated using tabular analysis. Two levels of analysis were conducted:

1. Per-user-group analysis, which summarized total usage indicators across all databases for each user group.
2. Per-database analysis, which examined usage levels across all user groups to identify high-value, moderate-value, and underutilized electronic resources.

Databases were classified as underutilized when they exhibited zero or negligible content retrieval (e.g., no full-text or abstract requests) despite recorded sessions and searches. Descriptive statistics such as totals and frequency counts were used to interpret patterns of use.

Limitations of the Study

The study relied exclusively on quantitative usage data and did not include qualitative measures such as user surveys or interviews. As a result, motivations behind user behavior and underutilization were inferred rather than directly measured.

RESULTS

This section presents an analysis of the electronic resource usage patterns observed within the university library during the 2024–2026 period. The findings are structured to demonstrate the distribution of engagement across various academic departments and specific database platforms, providing an empirical basis for assessing institutional value. This mapping highlights how digital subscriptions align with curricular demands and identifies specific areas where resource utilization can be optimized to better support the university's research and instructional goals.

Table 1.- Electronic Resource Usage by User Group (2024–2026)

User Group	Sessions/Searches	Full-Text Retrieval	Abstract Views	Overall Usage Pattern
Senior High School (SHS)	Very High	High	High	Intensive, requirement-driven use
College of Education (SOE)	High	Very High	High	Research-oriented use
College of Nursing & Pharmacy (CONP)	High	Very High	Moderate	Evidence-based retrieval
School of Arts & Sciences (SAS)	Moderate	High	Moderate	Multidisciplinary engagement
Business (SBPA)	Moderate	Moderate	Low	Targeted usage
CITCLS	Moderate	Selective	Low	Program-specific use
CHTM	Low	Low–Moderate	Low	Limited specialization use
CEA	Very Low	Very Low	Very Low	Minimal engagement
Basic Education (GS/JHS)	Low	Very Low	Low	Exploratory use

As indicated on Table 1, electronic resource usage is unevenly distributed across user groups. Senior High School and Education students demonstrate the highest levels of engagement across all indicators, reflecting strong integration of database use into academic requirements. Similarly, Nursing and Pharmacy students exhibit high levels of full-text retrieval, suggesting engagement with evidence-based materials.

In contrast, Engineering and basic education groups show minimal usage across sessions, searches, and retrieval metrics. This pattern suggests that disciplinary requirements and instructional design significantly influence database utilization, with research-intensive programs generating higher engagement.

Table 2.-Classification of Databases Based on Usage Value

Database	Sessions/Searches	Full-Text Retrieval	Value Level	Interpretation
Academic Search Elite	High	High	High Value	Core multidisciplinary resource
ERIC	High	High	High Value	Essential for education programs
Business Source Elite	Moderate	Moderate–High	Moderate Value	Program-specific (business)
Psychology & Behavioral Sciences	Moderate	High (SOE)	Moderate–High Value	Discipline-aligned
Hospitality & Tourism Complete Library	Low	Moderate (CHTM)	Moderate Value	Niche resource
Information Science Source	Low–Moderate	Moderate	Moderate Value	Specialized use
Art & Architecture Complete	High searches	Very Low retrieval	Low Value	Low conversion rate
GreenFILE	Low	Very Low	Low Value	Minimal relevance
Military & Government Collection	Low	Very Low	Low Value	Underutilized
Primary Search / MAS Ultra	Moderate exposure	Minimal use	Low Value	Misaligned with higher education

The classification as appeared on Table 2 reveals that only a subset of databases delivers substantial academic value. High-value databases, such as Academic Search Elite and ERIC, consistently demonstrate strong engagement across sessions, searches, and full-text retrieval. These resources are closely aligned with curriculum needs.

Moderate-value databases show targeted use within specific disciplines, indicating their importance for particular programs but limited institutional-wide impact. In contrast, several databases exhibit high search

activity but negligible content retrieval, indicating low conversion from discovery to use. These findings suggest that value is not determined by access alone but by actual academic engagement.

Table 3.- Relationship between Search Terms and Content Use

Type of Search Term	Example Terms	Retrieval Outcome	Interpretation
Academic/Research Terms	research methods, statistics	High full-text use	Strong alignment with academic tasks
Education Topics	teaching strategies, bullying	High retrieval (ERIC)	Curriculum-driven searching
General Knowledge	population, global issues	Moderate use	Surface-level engagement
Non-Academic / Practical	cashback, materials	Little to none	No academic relevance
Broad/Unstructured Queries	short phrases, vague terms	Low conversion	Ineffective search strategy

The findings found on Table 3 indicate a clear relationship between search intent and content use. Searches that are academically oriented are more likely to result in full-text retrieval, demonstrating effective use of library resources. Conversely, non-academic and unstructured queries rarely lead to meaningful engagement.

This pattern highlights a search–use gap, where users engage in database searching without successfully retrieving or utilizing scholarly content. The results suggest that while users are active in searching, their strategies are not always aligned with academic research practices, emphasizing the need for improved information literacy instruction.

DISCUSSION

The findings of this study, when examined collectively reveal a coherent and meaningful picture of electronic resource use within the academic library. Patterns of usage demonstrate that engagement with electronic resources is not uniform across user groups; rather, it is strongly influenced by academic requirements and the nature of disciplinary practices. Programs with intensive research demands tend to generate higher levels of sessions, searches, and content retrieval, indicating that need-based use remains a primary driver of engagement.

In relation to database value, the results indicate that the worth of subscribed electronic resources is not determined by their mere availability, but by the extent to which they are actively used. Databases that record high levels of searches and full-text access clearly provide greater academic value, while those with minimal engagement suggest underutilization. This highlights the importance of evidence-based collection management, where subscription decisions are guided by actual usage data rather than assumptions of relevance.



Furthermore, search behavior plays a critical role in shaping the outcomes of database use. The findings suggest that access alone does not guarantee meaningful learning; instead, the effectiveness of search strategies determines whether users are able to retrieve relevant and useful information. Inefficient or unfocused search practices may limit the benefits of available resources, even when access is readily provided.

Across all three research questions, a consistent theme emerges: instructional integration is the strongest predictor of electronic resource value. Databases that are embedded within course requirements and academic activities exhibit sustained and meaningful use. In contrast, resources that are not incorporated into teaching and learning processes tend to remain underutilized, regardless of their potential value or accessibility.

Conclusion

In conclusion, this study demonstrates that electronic resource usage varies significantly across user groups, that only a subset of databases delivers measurable academic value based on actual engagement, and that effective search behavior is essential in transforming access into meaningful learning. These findings collectively underscore that access, use, and learning are interconnected processes, but they do not occur automatically without intentional support and integration.

Recommendation

Based on these insights, several recommendations are proposed. First, academic libraries should align their subscriptions with disciplines that demonstrate high usage to ensure optimal allocation of resources. Second, there is a need to integrate electronic databases more deliberately into course requirements to promote consistent and purposeful use. Third, strengthening search skills and information literacy programs is essential to enhance users' ability to effectively navigate and utilize available resources. Finally, continuous evaluation of usage data should be institutionalized to support informed and responsive collection management decisions.

Compliance with Ethical Standards

The study utilized aggregated and anonymized usage data with no personally identifiable information. As such, it posed minimal ethical risk and did not require individual user consent. The data were used solely for research, evaluation, and institutional improvement purposes.

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