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Patterns and Preferences: An Analysis of OPAC Usage by Patrons at Manonmaniam Sundaranar University Library Tirunelveli

Samuel Raja J¹, Dr. A. Thirumagal²

Research Scholar, Reg No. 18134012071066, Department of Library and Information Science, Manonmaniam Sundaranar University, Tirunelveli -627012, TN, India

Email id: iamjsathya@gmail.com

²Librarian, Department of Library and Information Science, Manonmaniam Sundaranar University, Tirunelveli- 627012, TN, India. Email id: librarian@msuniv.ac.in

Abstract

Purpose: This study aimed to empirically investigate the interaction between patrons and the Online Public Access Catalog (OPAC) at the Manonmaniam Sundaranar University Library. Its primary purpose was to identify dominant search patterns, assess user satisfaction, and uncover specific challenges to provide evidence-based recommendations for enhancing the system's functionality and user experience.

Methodology: A mixed-methods research design was employed, analyzing data from two primary sources. First, quantitative transaction logs from the OPAC system for a three-month period (August to October 2019) were examined. Second, qualitative and quantitative data were gathered through a structured questionnaire distributed to 250 library patrons, from which 211 valid responses were received—an 84.4% response rate. All quantitative data were analyzed using IBM SPSS Statistics software for descriptive and inferential statistics.

Findings: The study revealed a heavy reliance on basic OPAC searches (52.1% keyword/title), widespread user difficulty with irrelevant results (80.1%), and a strong preference for a simpler, Google-like interface (91.5%). A clear skills gap exists, where search success rates correlate directly with academic seniority, from 72.7% (faculty) to 37.1% (undergraduates).

Originality/Value: This research provides the first evidence-based analysis of OPAC usage specific to MSU Library, uniquely combining objective transaction log data with direct user feedback in a regional Indian academic context. The findings offer novel, actionable insights for optimizing library discovery systems in similar university settings.

Keywords: OPAC, User Behavior, Search Patterns, Academic Library, Information Retrieval, Library Services, MSU Library, Mixed-Methods Research.

1. Introduction

In the contemporary academic ecosystem, the library's Online Public Access Catalog (OPAC) serves as the primary digital gateway to its intellectual resources. Its effectiveness directly influences research productivity, learning outcomes, and the overall user experience.

As user expectations evolve in an age dominated by intuitive, algorithm-driven search engines like Google, academic libraries face the critical challenge of ensuring their catalogs remain both powerful and user-friendly. A deep understanding of how patrons actually interact with the OPAC their search patterns, stumbling blocks, and preferences—is therefore not merely beneficial but essential for strategic development and service optimization.

At the Manonmaniam Sundaranar University (MSU) Library in Tirunelveli, this understanding has largely been anecdotal. While the OPAC is a central service, there has been no systematic, data-driven study to document how its diverse community of undergraduate students, postgraduates, research scholars, and faculty members navigate the system. This gap in local empirical evidence presents a significant problem. Without concrete data on usage patterns and user perceptions, library administration cannot make informed decisions about interface redesign, resource allocation for digital literacy training, or the prioritization of technical upgrades. Consequently, there is a risk that the catalog may not be meeting its full potential, leading to user frustration, inefficient resource discovery, and a possible underutilization of the library's valuable collections.

This study, titled "Patterns and Preferences: An Analysis of OPAC Usage by Patrons at Manonmaniam Sundaranar University Library, Tirunelveli," seeks to address this critical gap. It moves beyond assumption to provide a comprehensive, evidence-based analysis of OPAC engagement. By investigating the specific ways in which patrons search, the difficulties they encounter, and the features they desire, this research aims to illuminate the real-world interaction between users and the library's primary discovery tool. The insights generated are intended to form a solid foundation for enhancing the OPAC's functionality, tailoring user education programs, and ultimately strengthening the library's role in supporting the academic mission of Manonmaniam Sundaranar University.

2. Review of Literature

The literature on Online Public Access Catalogs (OPACs) examines their evolving functionality, user interaction patterns, and the challenges and opportunities presented by new technologies. This review synthesizes key studies that inform the context for analyzing OPAC usage at Manonmaniam Sundaranar University Library.

Research on user interaction with OPACs highlights significant behavioral patterns and usability challenges. **Chen & Albee (2012)**, in their study of an open-source system, found that while users appreciated enhanced accessibility, they often struggled with complex search syntax, leading to a preference for simple, keyword-based queries—a finding that underscores a common gap between system design and user expertise. Extending this behavioral

analysis, **Ndumbaro (2018)** employed digital footprint analysis to objectively map user journeys, revealing that a majority of OPAC sessions were characterized by brief, non-iterative searches and a high rate of abandonment following initial search failures. This indicates that users often lack the persistence or knowledge to refine unsuccessful queries, a critical insight for improving user support.

The transition from traditional OPACs to modern discovery layers is a major theme in contemporary literature, particularly in developing contexts. **Adeyemi & Omopupa (2020)** surveyed Nigerian librarians, identifying a significant gap between the recognized need for next-generation discovery systems and the perceived readiness to implement them, largely due to constraints in technical knowledge and infrastructure. Complementing this, **Bakrin, Bello, & Ogunrinde (2020)** investigated technological enablers, demonstrating that the adoption of cloud computing could substantially enhance OPAC visibility, accessibility, and performance in Nigerian university libraries. This suggests that technological modernization is a crucial prerequisite for improving user experience.

Focusing on the Indian context, **Kumar & Singh (2017)** provided a foundational case study at GGIPU, Delhi, reporting moderate to frequent OPAC use primarily for locating known items via author and title searches. Their study noted a low utilization of advanced search options and subject headings, pointing to a need for user education—a pattern that likely has resonance in other similar Indian academic settings.

3. Objectives:

- To profile OPAC users and their usage frequency.
- To analyze actual search patterns from transaction logs.
- To evaluate user satisfaction and preferences via survey.
- To correlate search success with user academic level.
- To propose data-driven recommendations for OPAC improvement.

4. Statement of the Problem

The Online Public Access Catalog (OPAC) serves as the fundamental digital gateway to library collections, yet its effectiveness is contingent on aligning with user search behaviors and preferences. At the Manonmaniam Sundaranar University (MSU) Library in Tirunelveli, there is a critical lack of empirical data on how its diverse patron base—including students, researchers, and faculty—actually interacts with the OPAC system. Without a systematic analysis of usage patterns, search strategies, and user satisfaction, library administration operates without evidence to guide crucial decisions. This knowledge gap poses a significant

problem: the library cannot confidently optimize its OPAC interface, improve resource discovery, or design targeted information literacy training. Consequently, there is a risk that the current OPAC may not meet user needs efficiently, leading to suboptimal resource utilization, patron frustration, and a potential decline in the perceived value of library services. This study, therefore, seeks to investigate the specific patterns and preferences characterizing OPAC usage at MSU Library to provide a data-driven foundation for enhancing its functionality and user experience.

5. Methodology:

This study employed a mixed-methods research design to comprehensively analyze OPAC usage patterns and user preferences at the MSU Library. The primary quantitative data was derived from an analysis of anonymized OPAC transaction logs spanning a three-month period from August to October 2019, capturing objective metrics such as search frequency, search types, and session duration. To contextualize these behavioral patterns with user perspectives, qualitative data was collected through a structured questionnaire distributed to 250 patrons; 211 completed responses were received and analyzed, yielding a high response rate of 84.4%. The quantitative data from both the logs and the closed-ended questionnaire responses were systematically coded and analyzed using SPSS applying descriptive statistics, frequency distributions, and cross-tabulations to identify significant trends and correlations. This methodological triangulation enabled a robust analysis where statistical trends from the transaction logs were interpreted and enriched by the direct insights from questionnaire responses, providing a holistic understanding of patron interaction with the online catalog.

6. Data Analysis:

Table 1: Demographics of Survey Respondents (N=211)

Demographic	Category	Frequency	Percentage (%)
Patron Type	Undergraduate Student	89	42.2
	Postgraduate Student	72	34.1
	Research Scholar	28	13.3
	Faculty Member	22	10.4
Usage Frequency	Daily	31	14.7
	Weekly	102	48.3
	Monthly	67	31.8
	Rarely	11	5.2

The sample represents core library users, with students comprising 89.6% of respondents. Nearly half (48.3%) use the OPAC weekly, confirming it as a regular academic tool, though intensive daily use remains limited.

Table 2: OPAC Search Query Types from Transaction Logs (n=8,174)

Search Type	Frequency	Percentage (%)
Keyword/Title	4,257	52.1
Author	2,118	25.9
Subject	987	12.1
ISBN/ISSN	485	5.9
Advanced Search	327	4.0

Over half of searches are simple keyword/title queries. The minimal use of Advanced Search (4.0%) and Subject headings (12.1%) suggests users prefer basic searches or lack skills for complex queries.

Table 3: User Satisfaction with OPAC Features

Feature	Satisfied (%)	Neutral (%)	Dissatisfied (%)
Search Speed	68.2	22.3	9.5
Result Relevance	41.7	30.8	27.5
Interface Clarity	58.8	28.4	12.8
Mobile Compatibility	32.2	40.3	27.5

While search speed and interface clarity are generally acceptable, key issues emerge: only 41.7% find results relevant, and mobile compatibility scores low (32.2% satisfied), indicating critical gaps in user experience.

Table 4: Common Problems Reported by Users

Problem	Percentage Reporting (%)
Too many irrelevant results	80.1
Difficulty refining searches	62.1
Unfamiliar with advanced features	70.1
Prefer Google-like simplicity	91.5

Never received OPAC training	74.9
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A striking 91.5% prefer a simpler search experience. The high percentages for irrelevant results (80.1%) and lack of training (74.9%) reveal a system misaligned with user expectations and skill levels.

Table 5: Cross-tabulation: Patron Type × Search Success (Self-reported)

Patron Type	High Success (%)	Moderate Success (%)	Low Success (%)
Faculty	72.7	18.2	9.1
Research Scholar	64.3	28.6	7.1
Postgraduate	52.8	34.7	12.5
Undergraduate	37.1	44.9	18.0

Search success correlates strongly with academic seniority. Faculty report the highest success (72.7%), while undergraduates report the lowest (37.1%), highlighting a need for tailored training and interface guidance for novice users.

7. Limitations:

This study is bounded by its specific context and timeframe. The three-month data period (August–October 2019) may miss seasonal usage variations, and the findings from the single-university setting limit broad generalization. While the survey response rate was high, the sample may not fully represent all patron groups. Furthermore, the transaction log analysis reveals *what* users did but cannot fully explain the underlying *why* of their search behaviors and frustrations.

8. Findings of the Study

The analysis of both transaction logs and user survey data reveals significant patterns, preferences, and challenges in OPAC usage at the MSU Library.

- ❖ **User Demographics and Engagement:** The survey captured a representative sample of primary users: 42.2% undergraduates, 34.1% postgraduates, 13.3% research scholars, and 10.4% faculty. A strong majority (63.0%) reported using the OPAC at least weekly, confirming its role as an essential academic tool, though daily engagement remained moderate (14.7%).

- ❖ **Dominance of Basic Search Strategies:** Transaction log analysis (n=8,174 searches) showed a heavy reliance on elementary search methods. Keyword/Title searches constituted 52.1% of all queries, followed by Author searches (25.9%). In contrast, precision-based searches like Subject Headings (12.1%) and Advanced Search functionalities (4.0%) were markedly underutilized.
- ❖ **Critical Gap in Search Efficacy and Skills:** Despite moderate satisfaction with the interface (58.8%), users reported major difficulties with search precision. An overwhelming 80.1% frequently encountered too many or irrelevant results. This aligns with low self-reported proficiency in using search limiters (only 29.9% felt skilled) and a striking 74.9% having never received formal OPAC training.
- ❖ **Strong Preference for Simplified Discovery:** User preferences clearly favored a modernized search experience. A near-unanimous 91.5% of respondents expressed a desire for a simpler, single search box akin to Google. Furthermore, dissatisfaction with mobile compatibility (only 32.2% satisfied) indicates the OPAC is not meeting expectations for on-the-go access.
- ❖ **Disparity in Success by Academic Seniority:** A clear competence gradient emerged across user groups. Faculty (72.7%) and research scholars (64.3%) reported the highest search success rates. Success decreased with academic seniority, with undergraduates reporting the lowest rate (37.1%). This underscores that search effectiveness is closely tied to user experience and academic research skills.

9. Conclusion

This study provides a detailed empirical analysis of OPAC usage patterns and user preferences at the Manonmaniam Sundaranar University Library. By integrating quantitative data from transaction logs with qualitative insights from user surveys, the research reveals a clear and consistent narrative: while the OPAC is a regularly utilized tool, a significant gap exists between its current functionality and the needs and expectations of its patrons.

The findings confirm that users overwhelmingly rely on basic keyword and title searches, while advanced features and controlled vocabulary remain underused. This limited search strategy directly contributes to the predominant user challenge: retrieving too many irrelevant results. Crucially, this issue is compounded by a widespread lack of formal training and a strong, nearly unanimous preference for a simpler, Google-like search experience. The study further identifies a distinct competence gap, where search success correlates positively with academic seniority, leaving undergraduate students particularly disadvantaged.

Therefore, it is concluded that the OPAC at MSU Library is not fully optimized for effective resource discovery in its current state. To bridge this gap, the library must prioritize a dual-focused strategy: first, a user-centric redesign of the OPAC interface to simplify the search experience and improve mobile accessibility; and second, the implementation of mandatory, tiered information literacy programs tailored to different user groups, with special emphasis on undergraduate education. By addressing these core issues of design and digital literacy, the library can transform its OPAC from a basic catalog into a more intuitive, efficient, and satisfying gateway to its collections, ultimately enhancing the academic support provided to the entire university community.

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